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MEETING
STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL JUSTICE ADVISORY COMMITTEE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 East Copley Drive
Diamond Bar, California

TUESDAY, NOVEMBER 15, 2005

REPORTED BY: Sharon Campbell, CSR, RPR
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A P P E A R A N C E S

CALIFORNIA ENVIRONMENTAL JUSTICE ADVISORY COMMITTEE
MEMBERS:

Joe Lyou, California Environmental Rights Alliance,
Co-Chairperson

Barbara Lee, Air Pollution Control Officer in the
Northern Sonoma County Air Pollution Control
District, Co-Chairperson

Shankar Prasad, Deputy Secretary for Cal/EPA

David Arrieta, DNA Associates

Sue Georgino, Community Development Director for the
City of Burbank

Diane Takvorian, Environmental Health Coalition

Michael Dorsey, San Diego County Department of
Environmental Health

Barry R. Wallerstein, South Coast Air Quality
Management District

Martha Dina Arguello, alternate for Teresa Deanda,
California for Pesticide Reform

Lenora Volturmo, Pala Band of Mission Indians

Roberts Sams, Staff Counsel, State Water Resources
Control Board

Antonio Diaz, Alternate for Yuki Kidokoro,
Communities for a Better Environment

Robert Harris, Pacific Gas & Electric

William Jones, County of Los Angeles Fire Department,
Health Hazardous Materials Division

Jose Carmona, Center for Energy Efficiency and
Renewable Technologies and alternate to
Dr. Joseph Lyou

Also Present: Malinda Dumisani
Jeanine Townsend

I N D E X

1		
2		
3	Introduction and Opening Remarks	5
4	- Committee Co-Chairs, Joe Lyou and Barbara Lee and Dr. Shankar Prasad	
5	Committee Discussion and Recommendations	
	- By-Laws	8
6	- Update on IWG Meeting	13
7	- Cumulative Impacts	56
8	Public Comments Period	18
9	Hydrogen Highway	
	- Facility Tour	110
10	- Staff Presentation - Lisa Kasper	110
	- Cynthia Verdugo-Peralta, SCAQMD Board Member and Vice-Chair of the California Fuel Cell partnership	111
11	- Dr. Jack Brower, Adjunct Assistant Professor, Mechanical and Aerospace Engineering, UC Irvine	129
12	- Jon Slangerup, Solar Integrated	145
13	- Carl Baust, Orange County Fire Authority	158
14	- Tony Brasil	194
15	- Public Comments Period (After each presentation)	
16	- Committee Discussion & Recommendations	175
17		
18		
19		
20		
21		
22		
23		
24		
25		

1 DIAMOND BAR, CALIFORNIA; NOVEMBER 15, 2005

2 9:19 A.M.

3
4 JOSEPH K. LYOU: May I have your attention, please.

5 Good morning. We're waiting for the members to arrive
6 and get a quorum maybe. We'll call the meeting to
7 order. Introduction and opening remarks, go around the
8 table and say who you are.

9 My name is Joe Lyou. I'm with the California
10 Environmental Rights Alliance, and I'll be co-chairing
11 this morning. And the other co-chair, Barbara Lee,
12 will be taking over this afternoon.

13 And everyone has been asked to speak into the
14 microphones because this is being recorded on
15 audiotape.

16 BARBARA LEE: My name is Barbara Lee. I'm the air
17 pollution control officer in the Northern Sonoma County
18 Air Pollution Control District. I'm one of the two
19 area district representatives for CEJAC.

20 DAVID ARRIETA: Good morning. My name is David
21 Arrieta. I'm with DNA Associates and one of the
22 business representatives.

23 SUSAN GEORGINO: Good morning. I'm Sue Georgino,
24 the Community Development Director for the City of
25 Burbank.

1 DIANE TAKVORIAN: Good morning. My name is Diane
2 Takvorian with the Environmental Health Coalition and
3 one of the environmental justice representatives.

4 MICHAEL DORSEY: Good morning. My name is Michael
5 Dorsey. I'm with the San Diego County Department of
6 Environmental Health, and I'm one of the CUPA Forum
7 representatives for the health side.

8 BARRY R. WALLERSTEIN: Good morning. I'm Barry
9 Wallerstein for the South Coast Air Quality Management
10 District. I'm the other air district representative on
11 the committee.

12 MARTHA DINA ARGUELLO: I am Martha Dina Arguello
13 alternate for Teresa Deanda, who is a representative
14 from the environmental community.

15 LENORE VOLTURNO: Good morning. My name is Lenora
16 Volturno, and I work for the Pala Band of Mission
17 Indians, and I'm the tribal representative.

18 ROBERT SAMS: Good morning. My name is Roberts
19 Sams. I'm the staff counsel, State Water Resources
20 Control Board.

21 SHANKAR PRASAD: Welcome, Bob. Good morning. My
22 name is Shankar Prasad, Deputy Secretary for Cal/EPA.

23 And I'll also take this opportunity to thank
24 Barry Wallerstein and South Coast, who are hosting
25 this. And also, they graciously offered to provide the

1 snacks, as well as the lunch.

2 Thanks.

3 JOSEPH K. LYOU: I don't have any opening remarks.

4 I think that Shankar does.

5 Barbara, do you?

6 SHANKAR PRASAD: I, at this point, do not have
7 anything to say except one of the issues that came up
8 at the IWG meeting was the frequency of these meetings
9 and interest in the IWG group to kind of follow more
10 frequent meetings of the IWG that have been following
11 these CEJAC meetings.

12 That's one part of the issue. During the
13 update, the next line -- one of the items on the line
14 of the agenda, I'll be providing brief overview of how
15 IWG acting on each of your recommendations from the
16 last three meetings.

17 JOSEPH K. LYOU: And for members of the public,
18 materials for the meeting are on the back table
19 including the draft changes to the bylaws and material
20 about the hydrogen highway.

21 At this point, if we could just take a quick
22 look at the agenda, if anyone has any comments or
23 proposed revisions to the agenda, speak now or forever
24 hold your peace.

25 We should probably give -- I don't know if we

1 have a microphone that goes out in the audience. Do we
2 have a mobile one?

3 JEANINE TOWNSEND: No. We have a roving one. If
4 they want to come up here. . . .

5 JOSEPH K. LYOU: Well, I just wanted to give the
6 members of the public an opportunity to introduce
7 themselves.

8 COLLEEN CALLAHAN: My name is Colleen Callahan with
9 the American Lung Association of Los Angeles County.

10 WARREN HALL: Good morning. Warren Hall with City
11 of Los Angeles.

12 INAUDIBLE NAME: Chris (inaudible), CBE.

13 PENNY NEWMANN: Penny Newmann, Center for Community
14 Action and Environmental Justice.

15 RACHEL LOPEZ: Rachel Lopez from Center for Center
16 for Community Action and Environmental Justice in
17 Mira Loma.

18 JOHN FAUST: John Faust, OEHHA, Cal/EPA.

19 TOVA ROJAS: Tova Rojas with the State Health
20 Department, the Environmental Health Investigations
21 Branch.

22 ERIC BISSINGER: Eric Bissinger with the California
23 Waste Management Board.

24 ALEX TRUE: Alex True (phonetic), City of
25 Los Angeles Housing Department.

1 JIM MARTIN: Jim Martin, DTSC.

2 GRANT FROST: Grant Frost with STG&E.

3 JOSE CARMONA: Jose Carmona, Center for Energy
4 Efficiency and Renewable Technologies and alternate to
5 Dr. Joe Lyou.

6 DALE SHIM: Dale Shim (phonetic), Air Resources
7 Board.

8 JOSEPH K. LYOU: Norma and Ozzie. Over here. I'll
9 introduce you for you. Norma Nava (phonetic) with
10 California Environment Rights Alliance, and Ozzie Buki
11 (phonetic) with, I guess, Air Resources Board right
12 now --

13 UNIDENTIFIED SPEAKER: Cal/EPA.

14 JOSEPH K. LYOU: -- Cal/EPA. He's been assigned
15 to.

16 So we're looking at the agenda. I didn't hear
17 anyone with any comments on it; so we're just going to
18 move forward.

19 The first item on the agenda is the review of
20 proposed bylaws. The idea is to update the bylaws and
21 bring them into conformity with our practices and the
22 change in our role that we voted on and agreed upon and
23 then was approved by the interagency working group at
24 their last meeting.

25 I guess most of these changes are actually

1 proposed by me, and I did find one inconsistency when I
2 reread it. But I'm assuming that everyone has had a
3 chance to look at them.

4 The members of the public, those bylaws changes
5 are at the back table. The one thing I would point
6 out -- and what happened was that I went through the
7 bylaws and tried to clean them up and make them
8 consistent with the rule that was approved.

9 And then I turned it in to Cal/EPA, which they
10 made minor changes in terms of basically using the
11 acronym CEJAC in places throughout the document.

12 On page 5, at section 5, 1-A, I just found
13 something I think may be an inconsistency, when I
14 reread it the last time.

15 Where it says committee co-chair shall serve a
16 two-year term of office and may be reappointed for
17 additional terms, and then the following sentence, two
18 sentences down, upon expiration of the term, the
19 committee co-chair in in consultation with the
20 committee may be reappointed for one additional term.

21 So it's not clear whether, when it says
22 additional terms plural in the first one should it just
23 be one additional term up there or should the second
24 one just say additional terms plural.

25 Given Diane's and Dee's experience as cochairs,

1 I know what we'd probably argue for. But Shankar, do
2 you any opinion on this? Or anyone who has an opinion,
3 please --

4 SHANKAR PRASAD: I just have a comment, sort of.
5 We have asked to look at the appointment of the
6 committee people once in two years. So people
7 appointed would have a term of two years and then
8 continue on maybe.

9 So in this case, what will happen to the
10 co-chairs term and anything you may want to clarify.

11 JOSEPH K. LYOU: I see. I guess the real issue
12 that I'm pointing out is whether it can be more than an
13 additional one-year term or it should be an additional
14 term or how we want deal with that as a committee.

15 I really don't have a strong opinion one way or
16 the other. I just think it needs to be consistent.

17 The one change, we could just say, on the
18 second sentence, may be appointed to additional terms
19 and make it consistent with what was in the preceding
20 sentence.

21 Okay. Everyone seems to agree with that.
22 Actually, I guess, in order to consider this item, we
23 either need a motion or some discussion about the
24 proposed changes and then a motion.

25 SUSAN GEORGINO: I move for approval of the bylaws

1 as amended.

2 JOSEPH K. LYOU: Do we have a second?

3 BARRY R. WALLERSTEIN: I'll second.

4 JOSEPH K. LYOU: Discussion?

5 ROBERT HARRIS: Could you please clarify what it is
6 that you've done with that 518.

7 JOSEPH K. LYOU: We've struck the phrase an
8 additional one-year term and put in additional terms as
9 it says up here.

10 RORBERT HARRIS: Okay.

11 JOSEPH K. LYOU: So that it's just consistent.

12 Just so it's clear what the motion is, I
13 believe, at this point, is that the proposed changes as
14 they were circulated plus the one small correction to
15 make it consistent.

16 Is there any discussion among committee
17 members? We should actually take a -- I'm sorry about
18 this. We should have taken public comment before we
19 actually vote on this matter.

20 Are there any members of the public who would
21 like to address this item?

22 Okay. Thankfully, none.

23 ROBERT HARRIS: I think, Shankar still has --

24 JOSEPH K. LYOU: Shankar has a point, a
25 clarification.

1 SHANKAR PRASAD: I'm seeking opinion about the
2 issue of -- you have a two-year term.

3 JOSEPH K. LYOU: Right.

4 SHANKAR PRASAD: We've been already two years. So
5 some time during the time --

6 JOSEPH K. LYOU: You need to talking into the
7 microphone.

8 SHANKAR PRASAD: We're just asking the council
9 about how to clarify the issue in relation to the
10 person serving as a co-chair, meaning during those
11 two-year process, the application or I think whole
12 process begins.

13 And what happens during that period of time if
14 that person has already been there or if there is a
15 replacement kind of a thing, does this mean it is
16 agreed that this kind of person has a minimum term, for
17 those people who are serving as cochairs?

18 JOSEPH K. LYOU: All right. I think Barbara had a
19 suggestion.

20 BARBARA LEE: My suggestion was going to be that we
21 go ahead and take the vote on the motion that's on the
22 floor, and then give counsel the opportunity to review
23 it.

24 And if there is a problem, we can make whatever
25 change needs to be made at the next meeting.

1 JOSEPH K. LYOU: Okay.

2 So we'll put -- we'll, at least for potential
3 follow-up agenda for our next meeting, we'll put
4 potential bylaw changes on there based off the
5 potential problem where the co-chairs could actually
6 reach the end of their term and serving on a committee
7 during the time that they are appointed to be
8 co-chairs.

9 I think it's sensible, and we all understand
10 what that problem may be. Any other discussion on this
11 item? If not, I'll call a vote.

12 All in favor say aye.

13 COMMITTEE MEMBERS: Aye.

14 JOSEPH K. LYOU: Any opposed?

15 (No response.)

16 JOSEPH K. LYOU: Motion carries.

17 And that helps us catch up a little bit on our
18 agenda, which the next item is the area interagency
19 work group meeting update.

20 Dr. Prasad will provide to us information about
21 what happened at the interagency work group meeting,
22 which occurred on the 25th, I think it was, of October.

23 SHANKAR PRASAD: On October 25, the IWG met and all
24 the agencies were represented with -- except of the
25 DPR, which is represented by June 1 by the Director

1 Sean March (phonetic).

2 And at that meeting on the recommendations made
3 and by the CEJAC were presented and the first one, the
4 CEJAC role was approved and taken except for one
5 change.

6 In terms of saying that the communication
7 memorandum had included the implementation and
8 evaluation of CalePA's strategy and action plan being
9 consistent with, and that was struck.

10 And he used the replacement words saying in
11 considerations of the total recommendations of the
12 report.

13 This was basically the one change because some
14 of the members felt that everything cannot be tied into
15 the recommendations, whereas some recommendations may
16 be followed and some may have to be modified.

17 The goal for the pilot project was approved and
18 accepted without any modification but with a clear
19 sentencing that all votes are not applicable to all of
20 the pilot projects.

21 You may all recall that the CEJAC had
22 recommended unanimously that a separate LAG should be
23 found for each of the three projects of the ARB. There
24 was a little contentious debate on that aspect.

25 And basically the IWG did not accept any of the

1 proposals as made and basically agreed upon whatever
2 the current approach is being followed by those pilot
3 projects.

4 And they were articulated was that it is an
5 open process and inclusive process, and whoever wants
6 to participate in the group are welcome participate
7 and keep that open meetings.

8 And the comparison given was basically the
9 approach that was taken by the State Court Group that
10 came up a general recommendation. CEJAC policies
11 action, they'd be happy.

12 Here, you may see that we had proposed the
13 staff was to meet with IWG in terms of the legal
14 proposal, CEJAC may recall suggested that we have a
15 open public meeting of CEJAC and IWG directly and CEJAC
16 to discuss the proposal.

17 And we had internal discussions and so on. And
18 it was thought that that's not going to make much
19 progress.

20 So the recommendation was to establish a
21 technical review panel with one scientist to be on the
22 review panel, who would be acceptable in representing
23 the community interest.

24 And some of the members of the committee had
25 expressed an interest in taking a look at that said

1 one or two members of this panel could participate also
2 on that review panel, and take the lead and complete
3 this review in a manner in about three to four months'
4 period.

5 What IWG acted on was asking we would take the
6 lead and agreed with all the recommendations of who
7 should be the participants but also recommended that,
8 if then environmental agencies like the local Health
9 Department, County Health Department, and County
10 Municipal who might have a role if they were
11 interested, as well, to participate in that panel.

12 And as far as we try our best to come back to
13 the IWG with their findings and recommendations. And
14 another piece of action that was not voted upon was
15 asked to be assumed was the aspect of list checklist
16 and residing who is to be -- who has some contact with
17 HUD, Mr. Jackson, and could talk to him personally and
18 see if he can make that how to act or at least see how
19 hard the local County boards could make some progress
20 in terms of offering any location packages.

21 Two things that have happened, he made contact.
22 The conversation has happened, but in terms of
23 specifics how it will pan out is still to be worked
24 out. The initial conversation between the two has
25 occurred.

1 So hopefully, we will be able to get some
2 feedback to the IWG in its January meeting because they
3 said that they wanted set this and see what we can do
4 and what we cannot do and clearly make that statement
5 and more.

6 IWG, this committee was to find two people who
7 like to participate regarding this panel to be formed.
8 Thanks.

9 Then this coming Monday DPA project
10 communicated a recommendation that including
11 Chloropicrin, the issues that came up was that
12 Chloropicrin is important. Its use is not so much in
13 terms of quantity at that particular area.

14 And in fact, both the technical review panel
15 and the local advisory groups have really not approved
16 or not asked for this. It was only a member of this
17 committee and asked for it.

18 And as such because the monitoring had
19 encompassed much more than we originally planned was
20 the main meeting factor, they said they will consider
21 this inclusion in future project in an area that would
22 have higher use of Chloropicrin.

23 That's all. Thank you.

24 JOSEPH K. LYOU: Okay.

25 So before we start with our conversation, let's

1 have the opportunity for public comment on this item.

2 If there's any member of the public wishing to
3 speak to the update on interagency working group, ARB
4 project, Midway Village, or the DPR pilot project or
5 any of those matters at this time, please let me know.

6 Okay. So Penny Newmann. There's a mike over
7 here next to Diane, I think. Oh, there's one over
8 there. We'd love to have Penny just sit at the table
9 with us.

10 PENNY NEWMANN: I wanted to address the LAG
11 proposal that was put forward, although I'm a little
12 hesitant to speak, given the reaction that I got at the
13 IWG.

14 And have since found out I've been blacklisted
15 from participating in very important committees that
16 are undertaken at this moment and --

17 JOSEPH K. LYOU: Penny, why don't you, for the
18 record, identify yourself and your organization.

19 PENNY NEWMANN: Penny Newmann, Center for Community
20 Action and Environmental Justice.

21 JOSEPH K. LYOU: Thank you.

22 PENNY NEWMANN: I think that the reaction that the
23 DBOs gave during that, specifically ARB, has sent a
24 chilling effect upon communities and the public
25 participation approach.

1 I mean, what we were asking for, if you're
2 going to have an advisory group, that you have a group.
3 And what we ended up with and what they are proposing
4 is a public meeting.

5 Anybody who shows up participates. It provides
6 no continuity. It provides no way of responsibility
7 and being able to track and hold accountable the
8 provisions and agreements that are developed in that
9 setting.

10 So it has really sent a message to the
11 communities that I work with in the Inland Valleys that
12 ARB is not really interested in doing it a
13 comprehensive way. That they'll have public meetings,
14 and then they'll go about doing what they want.

15 And I just wanted to express to this group
16 that, you know, communities are very, very upset about
17 both the response we got, which I felt was very -- an
18 overresponse to what I was saying or trying to
19 communicate.

20 And that the ramifications from that have been
21 pretty chilling to people, as well; so I just wanted to
22 put that on the table.

23 Thank you.

24 JOSEPH K. LYOU: We have Dale Shim from the Air
25 Resources Board.

1 BARRY R. WALLERSTEIN: I have a question for Penny.

2 JOSEPH K. LYOU: Sure.

3 BARRY R. WALLERSTEIN: Since you were there and a
4 number of us were not there, I guess my question for
5 you, at this point, is do you have a recommendation for
6 the committee at this point?

7 PENNY NEWMANN: I'm unclear as to the role that
8 this committee plays with IWG.

9 I mean, they clearly flat-out rejected the
10 proposal that this committee unanimously put forward,
11 as I understand -- I wasn't at that meeting -- that
12 there wasn't a counterproposal.

13 We heard comments about that they didn't want,
14 you know, specific numbers. Maybe we wanted more than
15 two local representatives; so that would tie them in.

16 But they didn't come back with, you know, we
17 want four on there. There wasn't any response other
18 than "we don't want this."

19 BARRY R. WALLERSTEIN: Do you -- you said that it
20 had a chilling effect on the affected community groups,
21 that the State and others of us are counting on to help
22 provide input to ensure a successful project.

23 Are the community groups planning to still
24 participate?

25 PENNY NEWMANN: I don't know. I can't speak for

1 other communities.

2 I can speak for the ones we work with in the
3 Inland Valleys.

4 And given the reactions of ARB in recent
5 months, both with the MOU and other things, we're very
6 hesitant to participate because we don't believe that
7 they are listening to what communities are saying. We
8 don't believe that they are taking our input seriously.

9 And I think, you know, the indication is, from
10 all of the actions, that they've made up their mind
11 what they're going to do.

12 And it really doesn't really matter who shows
13 up or what people have to say. They're going to go
14 about doing their own thing.

15 JOSEPH K. LYOU: Diane, you have a question or
16 comment on this --

17 DIANE TAKVORIAN: In response to Barry's
18 question --

19 BARBARA LEE: You need to speak in the microphone,
20 Diane.

21 DIANE TAKVORIAN: There's a recommendation that
22 some of us have discussed, and I don't know if it would
23 be appropriate to put that on the table so that Penny
24 and other public members could comment on that, as well
25 as have committee discussion about it.

1 JOSEPH K. LYOU: I think Dale wanted to respond
2 directly to what Penny said.

3 So why don't we let him do that and move
4 forward so the public can comment in a more formal
5 manne.

6 DALE SHIM: I'm Dale Shim from the Air Resources
7 Board.

8 And from the questions we've had, I heard, and
9 comments, we're still very interested in working with
10 the communities on our pilot projects.

11 We had a LAG meeting in Wilmington last Monday
12 night. We had approximately 35 people there with a
13 good cross-section and, I think, a good response. Joe
14 was at that meeting. Jesus over there was at that
15 meeting.

16 And I felt we had a very productive meeting in
17 terms of identifying specific community issues and
18 projects that the community was interested in.

19 And we showed them some of the work that we had
20 done in between the previous -- in response to
21 questions that came up at the previous LAG meeting.

22 And they were very impressed with the
23 information we provided, and we're in the process of
24 scheduling a LAG meeting for Wilmington, and we're more
25 than happy to work with both people from Mira Loma and

1 Commerce to get those groups back on track again.

2 And it's definitely not a case where we made up
3 our minds about what things we want to do. I think the
4 only thing, when we had our meeting, that I tried to
5 direct our group was that the directions we got from
6 this committee was -- or from Cal/EPA was to at least
7 have some focus on cumulative impacts and on looking at
8 precautionary approach.

9 And so when we discussed project ideas, I did
10 try to say that those are certain areas that we're
11 supposed to focus on as part of what we're doing.

12 But otherwise, we left it wide open to the
13 kinds of comments and ideas that they were interested
14 in.

15 And one that came up that we're looking at
16 right now that we had never thought of before was
17 concerns in that community about the growth and
18 establishment of container storage yards and container
19 junk yards in terms of the permit for that process, for
20 permitting those and any regulations that affect those.

21 And their concern was in terms of what might
22 have been stored in those in the past and are there any
23 potential environmental impacts because of concerns
24 about the growth of that -- of being more and more
25 container storage yards in their area with growth of

1 trade.

2 So something we're looking into now was that an
3 aspect that we really hadn't thought of before. It
4 might be a multimedia effect. So we've already been in
5 contact with the City of L.A., trying to find out more
6 about that being an issue or not.

7 The point I want to make using that as an
8 example of is that we haven't made up our mind or
9 identified what it is we're going to do as far as
10 projects go and -- except in the terms we're looking at
11 things in the context of cumulative impact and
12 precautionary approach.

13 So we're more than willing to work with
14 anybody. We already have, I think, a pretty expansive
15 list for all the areas that we send out contacts for on
16 this.

17 So at least, in terms of what we've had at out
18 two meeting in Wilmington, things worked very well, and
19 we'd like to try to move ahead with the other areas, as
20 well, if they are willing to.

21 JOSEPH K. LYOU: Barbara, I assume you're talking
22 directly at this point.

23 BARBARA LEE: Dale, not wanting to put you on the
24 spot at all, we're hearing, as a committee, that a
25 couple of groups have what sounds like really big

1 concerns about the public participation process that
2 ARB is undertaking as part of its effort.

3 And it sounds like ARB is feeling really good
4 about its public participation process they are
5 undertaking.

6 And so what I wanted to ask you if ARB has an
7 explanation as to why the two sides are viewing it
8 differently.

9 Have you talked about it, or you know, do you
10 just think they are mistaken?

11 DALE SHIM: Well, the proposal was put forward. I
12 can certainly understand the reasons and the thought
13 behind that in terms of trying to establish some kind
14 of continuity with fixed memberships.

15 And all I can really respond to is that my
16 manager's view was that, with the limited amount of
17 resources we have in terms of being able to support
18 these groups, they'd much rather see us working on
19 projects than working on identifying members and
20 alternates and making sure we have quorums and that
21 sort of things formed.

22 And that's my understanding of the reason why
23 they were reluctant to formalize that kind of thing.

24 BARBARA LEE: Okay.

25 And stepping way from the proposal for a

1 moment, you know, my sense was that the proposal came
2 from the groups as a way to address their sense that
3 the participation process wasn't working for them.

4 So my question for you is not whether or why
5 the proposal works or doesn't for you, but how ARB is
6 viewing public participation with those groups.

7 Does ARB feel the public participation process
8 with those groups is going well? And if not, what is
9 ARB proposing or contemplating doing in response to
10 that?

11 DALE SHIM: Well, I think that what happened was
12 that, prior to the way of MOU we -- the process had
13 just gotten started and clearly the process that was
14 used in developing the well MOU, in a lot of instances,
15 soured our relationship or at least soured the trust
16 that a lot of the community people had with the Air
17 Resources Board.

18 And I think that that is where the basic
19 cause -- that kind of shook the basic trust because we
20 said we were working with communities, and clearly, the
21 process with the well MOU did not follow that.

22 So I think that soured the relationship, and we
23 just really haven't recovered from that yet. And I
24 think that's really what I see is the problem because I
25 don't think -- I think that the work we've done in

1 terms of identifying people for involvement for these
2 groups and fighting community members, fighting
3 business environmental groups to participate has been
4 on target.

5 And that where we haven't had really this kind
6 of blow-back from well MOU affecting the process
7 like -- I think it's more in the case of Wilmington,
8 our standard process, I think, seemed to work well.

9 But there appears to be a need to do more
10 bridge building or bridge repair to get our
11 relationship back on track in some of these other
12 areas.

13 BARBARA LEE: Okay.

14 So not -- you don't need to go through what all
15 your ideas might be.

16 But does ARB have a plan to do that bridge
17 building? Or are you not sure what you're going to do
18 at this point.

19 DALE SHIM: Well, I think that, in terms of what
20 we're doing in Wilmington, we think we know where we're
21 going.

22 In terms of Commerce and Mira Loma, we're -- if
23 these communities want us to come back and want to
24 continue working with us on pilot projects, we're more
25 than happy to do that.

1 Whether they want us to have some more smaller
2 group meetings, discuss how to arrange this, or whether
3 they want to go back and have it be a meeting -- a full
4 public meeting on the pilot projects, either way, we'd
5 be happy to do that.

6 JOSEPH K. LYOU: Marta.

7 Is there any way we could get Henry's
8 microphone --

9 MARTHA DINA ARGUELLO: First, I'm a little confused
10 that, if that the MOU process did a lot to erode trust,
11 that accepting the LAG proposal that came from
12 communities is an obvious way to restore that; so that
13 doesn't make a lot of sense.

14 Second, we've done a lot of work in our
15 organization around the precautionary principle and
16 what are these forms of public participation.

17 So it seems to me that you have a community
18 that self-organized and developed a way of implementing
19 the participation piece of the precautionary principle,
20 which is the pilot projects are about, and then it gets
21 rejected.

22 And third is, from what I understand -- I don't
23 want to speak for the communities that have been doing
24 this -- but they've done a lot of work for you.

25 So without resources, as most community

1 organizations usually do, do the work of identifying
2 who those stakeholders and bringing them to the table.

3 So again, I wasn't at the interagency work
4 group, but I'm deeply disappointed you have a model for
5 public participation that fits in with a pilot project
6 for precaution and it's rejected.

7 SHANKAR PRASAD: I want to respond to that point.

8 It is a model that has worked in a place does
9 not necessarily, if you recall the six months back
10 there, the discussions we had with this group, we did
11 not say that that model will be followed and at any
12 pilot project.

13 In defense of the ARB's view, they have also
14 done the public participation in terms of developing
15 good policies and actions items on the agent without
16 having a formal establishment of such a group.

17 And their opinion was that originally they were
18 supposed to do only one pilot at Wilmington, and when
19 it was a workshop that on this date and knowing what
20 the issues are in this area, they expanded it to
21 include Commerce and Mira Loma, as well.

22 And because of the resources in -- because as
23 you know, any of these IWG projects that have been
24 undertaken, though there is regulation, we have some
25 policies and recommendations, there is no budget

1 attached to it, there are no resources attached to it
2 and something that has to be called out of.

3 So that was one of the main reasons that we
4 had -- we felt that it is not feasible to go and
5 establish (inaudible) CEJAC for each of the other
6 projects.

7 JOSEPH K. LYOU: Barry, if you can give me one
8 second.

9 Bill snuck in and Antonio just arrived. So if
10 you two can introduce yourselves for the record and for
11 the public.

12 WILLIAM JONES: Bill Jones with L.A. County
13 Fire, CUPA representative.

14 ANTHONIO DIAZ: Antonio Diaz. I am an
15 alternative for Yuki Kidokoro.

16 JOSEPH K. LYOU: Okay.

17 And we have Barry and then Diane. And I know
18 that Penny is chomping at the bit.

19 PENNY NEWMANN: Can I come to the microphone so
20 that --

21 JOSEPH K. LYOU: You're more than welcome to, sure.

22 PENNY NEWMANN: This proposal was not a result of
23 the MOU. That we had already had meetings in
24 Mira Loma, and people had showed up for it. They were
25 ready to sign up. There was no opportunity to do that.

1 They left that meeting very frustrated, feeling
2 that they were not engaged in the process. They heard
3 nothing back from ARB.

4 And it was felt that it would be very helpful
5 to have a set group of people that ARB could
6 communicate with, not leave out anybody.

7 The meetings would be totally public. There
8 would be opportunity for public input just as this
9 group does, but that, at least, there would be some
10 people to follow-up on things and make sure that the
11 process kept going instead of it just falling apart.

12 JOSEPH K. LYOU: Okay.

13 Now, we want to avoid having a big debate
14 between community groups and ARB staff on this issue.

15 Just for everyone's knowledge, ARB does
16 systematically go before their board on Environmental
17 Justice update, and it's, you know, not only ARB staff,
18 but I'm sure that the board has an interest in what's
19 going on with environmental justice within the agency.

20 I have Barry and then Diane, and at some point,
21 Diane was actually going to make a proposal of some
22 sort.

23 So Barry, you're up.

24 BARRY R. WALLERSTEIN: Well, I appreciate
25 Shankar's -- I guess I'll call it a partial

1 explanation -- but I find myself really puzzled though
2 because, as a standard operating mechanism, the State
3 Air Resources Board uses working groups, formal working
4 groups with appointed people, and then the meetings are
5 open.

6 We do the same throughout government.
7 Certainly at our agency, we have lots of groups. If we
8 look at our multiple air toxic exposure studies, we
9 have a formal group.

10 Shankar has served on that group. I serve on
11 the ARB Environmental Justice working group, which has
12 met over several of the -- to discuss several of the
13 ARB Environmental Justice initiatives and products.

14 And so this seemed -- it seemed like a very
15 modest request to me personally. You know, if you
16 start with the simple question of have a specific group
17 of individuals as opposed to a free-for-all, have it
18 balanced, whatever the State would determine is
19 appropriate balance, and then have appropriate
20 delineation of what the role of the group is -- and I
21 can appreciate the State having its view of what the
22 role might be.

23 But to get in a large fight with the impacted
24 communities that you're conducting the project to work
25 with to provide information and ultimately to provide

1 environmental justice to, really leaves me in a
2 quandary.

3 And so I'm really kind of surprised that it has
4 gone down this path and has added to friction with
5 community groups. It just seems kind of needless,
6 based on my years of experience.

7 JOSEPH K. LYOU: Diane.

8 DIANE TAKVORIAN: I share your confusion, Barry,
9 and agree with many of the comments that of come
10 forward.

11 I have to say that I thought that -- I attended
12 the IWG meeting, and David and Joe did a superb job of
13 representing the work of the CEJAC and putting forward
14 the recommendations that we had made of the last
15 several months and everything.

16 And I was both disappointed with ARB's
17 continued opposition to what was a CEJAC, I believe,
18 unanimous decision and one that we came to after a fair
19 amount of discussion.

20 The recommendation that -- the proposal that
21 came from the community organizations was not accepted
22 in whole. It was amended. There was large discussion
23 about it.

24 And I think that we were thoughtful about that
25 and came forward with something that was an appropriate

1 recommendation to the IWG.

2 And I think one of the key things was that we
3 were keeping in mind that it be community driven and
4 that the process be transparent and accountable.

5 And not asking for anything different than what
6 occurs in many other settings. At the IWG meeting, the
7 ARB stated that they were in favor in concept of the
8 proposal but did not come forward with any amendments,
9 recommended amendments.

10 So I think, for all of us, it would have been
11 acceptable to hear back that the composition was
12 somehow off, that there should be three of one kind of
13 representative or rather than two -- or whatever the
14 amendments were.

15 But for me, I felt that it was quite
16 disrespectful on the part of the ARB not to come back
17 with a solid response to say we've considered something
18 that the CEJAC, which is made up of several diverse
19 stakeholders has considered seriously and thoroughly
20 and come back with a statement about what we'd like to
21 see different.

22 So I think there's a disappointment for all of
23 us on -- from ARB's response, but even more
24 importantly, I have to say that I'm profoundly
25 disappointed with IWG's response and Dr. Lloyd's

1 response because ultimately, there was no action taken.

2 Essentially, they ignored our proposal. And I
3 felt that was ducking the issue, that, you know, we
4 grappled with it. It was a difficult issue. We
5 grappled with it. We came back with a recommendation.

6 And they elected not to do that after ARB
7 refused to come back with a substantive response.

8 So the proposal that I would make, that I've
9 discussed with some folks here, is that we ask that a
10 subcommittee of this group of the CEJAC meet with the
11 BDO heads and Dr. Lloyd to discuss what the
12 relationship is with -- between CEJAC and IWG.

13 Because it seems to me that for something
14 substantive like this to be ignored essentially and
15 rejected doesn't mean that our time is being spent very
16 well.

17 I have to say that the recommendation doesn't
18 say to ARB go back and reconsider this, although I
19 think that should be something that you do. I don't
20 know what else we can say to you.

21 But perhaps that should also be an element of
22 the recommendation.

23 JOSEPH K. LYOU: So you're putting forward a motion
24 to recommend a creation of some sort of an ad hoc
25 subcommittee to meet with Dr. Lloyd and at least some,

1 if not all, members of the IWG to discuss --

2 DIANE TAKVORIAN: To discuss the communication and
3 our ability to work together.

4 I think that this incident doesn't really
5 reflect well on our commitment to public participation
6 of environmental justice because these are the groups
7 around this table that are committed to advancing
8 environmental justice.

9 And I think we did that in a serious and
10 sincere way -- and I think we have to have a
11 conversation with IWG about that. So there's one
12 element of it.

13 And the second, I'd be happy to add, if ARB
14 would think about it some more, although I can't
15 imagine what else we have to say about it, is that you
16 think again about accepting the original
17 recommendation.

18 JOSEPH K. LYOU: Okay. So that's a motion.

19 I hope that everyone has a clear understanding
20 what the motion is.

21 Is there a second to that motion?

22 MARTHA DINA ARGUELLO: Second.

23 JOSEPH K. LYOU: There's a second.

24 And then, I have Barry and then Barbara. Oh,
25 Bill. Your card was up at one point. I think you

1 already had a chance to speak.

2 WILLIAM JONES: Not yet.

3 JOSEPH K. LYOU: Barry, I guess -- no wait.

4 Barbara was up just before Barry.

5 BARBARA LEE: Diane, rather than asking ARB to
6 reconsider the specific thing they've already rejected,
7 how would you feel about asking them to come back with
8 their proposal for how to address the concerns raised
9 by the community groups about the public participation
10 process so that it can move forward in a way that the
11 community groups are comfortable with?

12 DIANE TAKVORIAN: I feel like I'd want to hear from
13 the community groups that are affected directly because
14 they've made their proposal, and ARB has just said they
15 don't want to do that -- to have a specified group.

16 So whether the groups and their representatives
17 here that can speak to that -- I feel uncomfortable
18 with that because I think we've heard from ARB as to
19 what their concerns are about it but --

20 BARBARA LEE: I don't mean specifically what their
21 concerns are about the proposal. But what they propose
22 to do, if they're not going to do that, but if they
23 recognize that there's a problem, what is it that they
24 are proposing to do?

25 DIANE TAKVORIAN: Well, not to put words in Dale's

1 mouth, I think he said they're going to have community
2 meetings and be open.

3 DALE SHIM: That's right.

4 DIANE TAKVORIAN: So I'm just saying I don't think
5 we need to do another round if that's the responses and
6 if that's where they are.

7 JOSEPH K. LYOU: Okay.

8 We have Barry and then Bill. And actually, let
9 Bob have the opportunity to introduce himself.

10 He has bells when he goes to introduce himself.

11 ROBERT HARRIS: Thank you very much. I apologize
12 for being late. I came down from Oakland. Once I was
13 at the airport, the cab driver was trying to give me a
14 tour of the city.

15 My name is Bob Harris, Pacific Gas & Electric
16 Company.

17 JOSEPH K. LYOU: Okay. Barry.

18 Thank you.

19 BARRY R. WALLERSTEIN: There's probably some in
20 this room that have known me to hit my head against the
21 wall when the wall wins.

22 I think, Diane, what at least I would like to
23 see happen here in part is, I'd like to just see a
24 simple written response from ARB. I don't think it's
25 fair to put Dale on the spot here.

1 I mean, this was a decision by the secretary
2 and heads of the boards and departments. And
3 similarly, although Shankar is an assistant secretary,
4 I think the community and the committee -- this
5 committee deserve at least a written response that
6 tells us why it was rejected and why there wasn't
7 something suggested in its place other than continuing
8 the path that was already underway.

9 I, too, would support having a small contingent
10 go meet at least with Secretary Lloyd because, if a
11 suggestion such as this is flatly rejected without a
12 suggestion of how to address the concerns, when the
13 standard process is to have fixed working groups -- and
14 by the way, I've recently been appointed to a goods
15 movement group by business, housing, transportation,
16 and Cal/EPA that has four or five subcommittees and
17 fixed membership and so on.

18 And I think we should not lose sight of the
19 fact that, when community groups ask for a committee,
20 that they are volunteering their time to participate.
21 It isn't that they are getting paid per se to go and
22 attend. There is no stipend here.

23 So I think it would be appropriate to send a
24 group, but what I would ask is, if we're going to send
25 a small contingent, there -- when I look at this

1 committee, I divide the committee up into kind of three
2 general groupings although, I guess, technically
3 there's more than that.

4 I see the environmental, environmental justice
5 community members that would also draw in the tribes in
6 labor. Then I see a bunch of government folks like
7 myself around the table. And then we have our business
8 representatives like Dave and Bob.

9 And I think it would be helpful that, whoever
10 is going to go talk to Alan, that we have at least one
11 of the business representatives, that we have a
12 government type there, and then we have another member
13 there that's more from the community perspective there
14 to talk with Alan about what do you really expect out
15 of us and what's going to happen when we bring you
16 recommendations and how can we best work together in
17 the future.

18 SHANKAR PRASAD: Dr. Wallerstein, I agree with you,
19 but I think having a word with not just the secretary
20 but to include others BDOs as far as possible,
21 depending on their time, would be -- in my opinion,
22 would be equally beneficial.

23 JOSEPH K. LYOU: And I think that's what Diane's
24 proposal was.

25 So from Barry, I got at least two issues. One

1 is, I think, to include in the motion that we ask for a
2 formal written response.

3 And Diane, you should consider whether or not
4 you want to include that in your motion.

5 But also, the question comes up who would be
6 the members who would actually volunteer to do this.

7 Why don't we give Bill a chance to make his
8 comment.

9 WILLIAM JONES: Well, I was just going to make a
10 suggestion, too, that the current and past chairs go to
11 this meeting. And you know, if there's another person
12 from business, maybe that would be a good makeup.
13 Because I think you have got everybody represented
14 there.

15 You certainly have the history there, and the
16 current concerns that you folks -- the current chairs
17 may have in what you're going to be doing in the
18 future; so I was going to make that suggestion.

19 Another thing is, in regards to community
20 groups in L.A. County, one of the things that we've
21 used is to rely on the community groups to do a lot of
22 that work that you referred to earlier that, you know,
23 your management didn't want you to spend the time on to
24 form these groups and to bring the group together so
25 that you're not spending a lot of time and effort

1 there.

2 By them doing that and then coming to the
3 table, it minimizes your, you know, workload and
4 whatever in doing that part of it.

5 And you'll have, hopefully, you know, a
6 representation of the community group there, and then
7 you bring your folks to the table, and you're done.

8 In terms of work load, it's real minimal.
9 We've done that before in L.A. County, and it works
10 real well.

11 And it gives them the independence to talk
12 among themselves and bring to the table who they feel
13 would be a good contributor to the process.

14 It's just an idea.

15 JOSEPH K. LYOU: Anyone else?

16 I would just like to say I'm supportive of the
17 motion. I'd actually like to see a formal response.
18 I'd like to see the motion amended to include Barry's
19 suggestion on that.

20 I'm a little hesitant to vote to include Dee on
21 the group to meet because she's not here to say whether
22 she actually wants to do it.

23 But I'd like to make sure, like Barry
24 suggested, that we have a broad representation of
25 interest at that meeting.

1 And as Shankar suggested and as Diane says that
2 we get as many of the BDOs because I think this goes
3 beyond just the question of ARB.

4 Because it wasn't only the rejection of our
5 proposal with regard to the local advisory group; it
6 was also the rejection of our proposal with regard to
7 Midway Village and the rejection of our proposal with
8 regard to Chloropicrin.

9 So there are obviously some issues in regard to
10 how we interact and relate to the IWG and how best to
11 make our relationship with that body more productive.

12 So Diane, I think we should ask you whether or
13 not you want to amend your motion.

14 DIANE TAKVORIAN: Well, I think it's fine to
15 include Barry's recommendation. I think it gets to
16 Barbara's sentiment, as well, as far as the written
17 response.

18 I guess off -- outside the motion, I would ask
19 if ARB could take, again, all this input into
20 account -- and I know -- I'm sorry, Dale, to keep
21 putting you in this position. You know, what are you
22 thinking.

23 But you know, it just doesn't make any sense,
24 and I think it is clouding the good work that ARB is
25 doing and wants to do. And that's the shame of it too.

1 So if you could -- I would say written respond
2 would be great. If you could make an oral response,
3 that said, yes, what were we thinking. We're in
4 agreement, I think it would be acceptable.

5 JOSEPH K. LYOU: So I think you second that motion.

6 DIANE TAKVORIAN: Marta did.

7 JOSEPH K. LYOU: Dave has a comment. Before we
8 take a vote, we're going to go back to public comment
9 because we haven't given the public an opportunity to
10 comment on our proposal.

11 DIANE TAKVORIAN: Can I just say --

12 JOSEPH K. LYOU: Absolutely.

13 DIANE TAKVORIAN: We're not including the
14 composition in the motion. It's just a suggestion.
15 Okay.

16 Because while I agree with you, Joe, that it
17 isn't not just about ARB and the L.A. pilot projects,
18 that a community group representative from L.A. and one
19 of those pilot projects should be in that meeting, that
20 contingent.

21 DAVID ARRIETA: Actually, Diane, I support Barry's
22 suggestion, and I want to make sure the business
23 elements are represented at the meeting. And I would
24 volunteer to be there.

25 So I think Barry's suggestion of saying that

1 the three sections be involved ought to be in the
2 resolution.

3 JOSEPH K. LYOU: Jesus, I think you had a comment.

4 Any other members of public, before we take a
5 vote, if they'd like to address the committee, you're
6 welcome.

7 MR. TORRES: Jesus Torres, CB organizer.

8 I also attended the meeting -- the last LAG
9 meeting in Wilmington, and although they were moving
10 forward and they've been really responsive in providing
11 some of the information we've been requesting, we're
12 really disappointed in the fact the LAG proposal got
13 rejected.

14 Also the fact that it wasn't even on the agenda
15 the day of the meeting with no explanation as to what
16 happened, no proposal, or anything like that.

17 So you know, there it goes, again, with the
18 trust the community has against the agency itself is
19 that we are really skeptical about, you know, what the
20 structure of the proposal is and the project.

21 And like I said, we're still moving forward.
22 And I can't speak for everybody that took part in that
23 meeting or is part of that, that LAG project, but I'm
24 just speaking from my personal opinion that it is a
25 concern.

1 And we would like some type of explanation or,
2 at least, you know, some type of maybe another
3 amendment or something where, you know, our demands are
4 going to be addressed in some form.

5 So thank you.

6 JOSEPH K. LYOU: Thank you.

7 Rachel.

8 MS. LOPEZ: Rachel Lopez from the Mira Loma.

9 And I thank you for your comments today on that
10 LAG, on our LAG proposal -- and I think basically our
11 community has been slapped in the hand enough by ARB.

12 And we are we were handing -- you know, we were
13 asking them to accept this as part of our -- I don't
14 know -- our -- at least to get -- to sit down at the
15 table and at least have some kind of communication and
16 at least come back into the community to continue the
17 process and make the community feel that ARB is really
18 out there wanting to help our community, wanting to
19 work with us since it hasn't worked out before.

20 And we just don't feel that their heart is in
21 helping our community. And I feel that if -- with this
22 proposal, it was a way of them coming to us and saying
23 "yes, we want to work with you" and "yes, we will work
24 with you." But obviously that didn't happen.

25 So I appreciate the proposal today, and I hope

1 they do reconsider. Because I appreciate and I think
2 the communities appreciate the fact that this pilot
3 project was put in the three communities and that it is
4 really needed.

5 But at this point, it's really hard for our
6 communities to trust ARB, and this was a way of getting
7 that trust back.

8 Thank you.

9 JOSEPH K. LYOU: Thank you, Rachel.

10 At this point, unless we have further
11 discussion, I think, in order to get out of this agenda
12 item, I need to move to the next -- hang on one second.
13 We'll get to you, Bob.

14 We're going to vote on this. If the motion
15 carries, we will consider who might be the
16 representatives who would serve on that ad hoc
17 subcommittee.

18 And then we need to respond, I think, to the
19 Midway Village proposal that a couple of our members
20 serve on the OEHHA work group to discuss the Midway
21 Village issue. And I think that gets us out of this
22 agenda item.

23 So Bob, you have a comment.

24 ROBERT HARRIS: No comment. Just a question.

25 I wanted to understand the nature of the motion

1 so that, if it in any way involves Midway Village, I
2 certainly want to recuse myself.

3 JOSEPH K. LYOU: I see. No.

4 We should clarify the motion, if we can, before
5 we vote on it. Maybe I should take a shot at
6 summarizing it.

7 It basically is to form a subcommittee to meet
8 with Secretary Lloyd and the other members of the BDOs,
9 the heads of the BDOs who are available to meet in
10 order to discuss the relationship between this body and
11 the interagency working group and to identify the
12 ability -- how we might be able to work together more
13 productively and also for -- to request that ARB -- is
14 it reconsider or is it -- how are we going to phrase
15 that, Diane?

16 DIANE TAKVORIAN: Write a written response to --

17 JOSEPH K. LYOU: Write formal response.

18 DIANE TAKVORIAN: -- CEJAC in regards to their
19 position on the proposed composition --

20 JOSEPH K. LYOU: Composition of the LAG.

21 ROBERT HARRIS: Okay.

22 JOSEPH K. LYOU: So are there any comments before
23 we vote? All those in favor please say aye.

24 COMMITTEE MEMBERS: Aye.

25 JOSEPH K. LYOU: Opposed?

1 (No response.)

2 JOSEPH K. LYOU: Motion carries.

3 So let's move on to who might be the -- who
4 would serve on this ad hoc subcommittee. Any --

5 BARBARA LEE: Dave volunteered.

6 JOSEPH K. LYOU: Dave volunteered.

7 DAVID ARRIETA: I volunteer.

8 JOSEPH K. LYOU: We've got one. Anyone else
9 interested?

10 WILLIAM JONES: Again, I go back to you two as
11 current chairs being important to set the stage for
12 our, you know --

13 MARTHA DINA ARGUELLO: We volunteer you.

14 SHANKAR PRASAD: We have Dave, Joe, Barbara.

15 JOSEPH K. LYOU: Diane, I think, is interested.

16 DIANE TAKVORIAN: (No audible response.)

17 JOSEPH K. LYOU: No.

18 BARBARA LEE: Why don't you run down the -- Shankar
19 has some recommendations.

20 JOSEPH K. LYOU: Yes. Shankar has some
21 recommendations.

22 He had Diane, but Diane would rather than --

23 DIANE TAKVORIAN: I'm okay with it. I just want to
24 be sure that -- I think it's important. And Yuki is
25 not here --

1 JOSEPH K. LYOU: That's exactly what I was
2 thinking.

3 DIANE TAKVORIAN: -- is the only member of the
4 committee that's from the area.

5 BARBARA LEE: Let's do the list, then we'll --

6 SHANKAR PRASAD: I have Diane, Joe, Barbara, Barry,
7 Dave, and Yuki.

8 BARRY WALLERSTEIN: Barry's schedule is kind of
9 tight with all my good moves and stuff.

10 DAVID ARRIETA: He's got containers on his mind.

11 JOSEPH K. LYOU: Then we would have Diane, Joe,
12 Barbara, Dave, and Yuki, Mike.

13 BARRY R. WALLERSTEIN: We have one
14 representative --

15 JOSEPH K. LYOU: The capable hands of Barbara will
16 do.

17 Antonio, I guess we're going to assume that
18 Yuki is going want to do this because of the fact that
19 CBE was one the groups that made a proposal.

20 I think what we'll do is give Yuki the option
21 of not participating in this if she doesn't want to.

22 Do we need a formal motion on this for the
23 creation of the subcommittee? I don't think so. I
24 think we have a consensus.

25 Hearing no dissent, I think that will be our

1 subcommittee for this group. And we will rely on
2 Shankar to help set up a meeting and his staff.

3 The next issue I had for this particular agenda
4 item, which was the IWG update, was that they suggested
5 that a couple of our members serve on the Midway
6 Village working group to consider the adequacy of the
7 cleanup goals, and the process was, I think, the main
8 role of that group.

9 It's going to be headed by office of
10 Environmental Health Hazard Assessment. Barbara has
11 whispered in my ear that she's very interested in doing
12 it.

13 Is there one of our other members of the
14 committee who would like to join Barbara in doing that.

15 ROBERT HARRIS: I'm not volunteering.

16 What I want is a clarification as to what the
17 intent of the individuals are. What's their role
18 again?

19 SHANKAR PRASAD: This panel, when there is some
20 questions raised about the scientific underpinnings that
21 went into that decision of the level of the cleanup and
22 the containment issues.

23 And Rosario Marin (phonetic) indicated at one
24 of meetings that whether somebody could go back and
25 look at those data and see if that was efficient and is

1 it possible to think about additional monitoring and
2 other views that need to be explored, as well.

3 That is one aspect of it. The second aspect of
4 it is if the scientific basis turns out to be all
5 correct, are there other opportunities that could be
6 pursued, though they did not fall under the purview of
7 the authority of the DTSE.

8 And as you remember, you mentioned about the
9 hard part that's being followed. And is there any
10 other thing that needs to happen.

11 ROBERT HARRIS: Again, my whole concern was that
12 the relocation issue be addressed as however possible.

13 Now, I guess clarification from my
14 standpoint -- I think I heard you say this, Shankar --
15 was that there has been some contact made with HUD.

16 And where are we out with that contact and does
17 it seem to be progressing --

18 SHANKAR PRASAD: That initial contact has been
19 made, and it will be followed up. That this committee
20 they sent the letter that had not reached up in the
21 chain.

22 So it has gone up different chain, and other
23 people are receiving it. And in fact, Rosario Marin
24 has indicated, if she does not get a response in the
25 next couple weeks, she will make it a point of going to

1 Washington, D.C. and have a personal meeting with
2 Mr. Jackson.

3 ROBERT HARRIS: From my personal viewpoint, if part
4 of this -- the people from this committee who are going
5 to participate in this is to work towards the
6 relocation, work towards pressuring HUD, I would
7 certainly be interested in participating.

8 SHANKAR PRASAD: DTSC this panel will be making
9 recommendations of avenues to pursue. But the primary
10 focus of this is review the previous documents because
11 there have been questions about the cleanup levels,
12 that it was not adequate and not safe.

13 So the whole issue of that's the scientific
14 piece that this committee has been asking for. And
15 actually, that's the reason that actually IWG says come
16 back to IWG not as a decision but at that point of time
17 IWG will take action how to follow.

18 JOSEPH K. LYOU: Barbara.

19 BARBARA LEE: I just wanted to respond to Mike's
20 question also because I've met with DTSC since our last
21 meeting as to CEJAC and gone over a number of things.

22 And my understanding is there is an effort
23 underway to see if a previous offer of relocation that
24 was very time limited could be made again to the
25 residents of Midway Village to put them at the top the

1 Section 8 housing list to move them out of Midway
2 Village.

3 And I know Rosario Marin is working on that and
4 there are others who are working on it, as well. So I
5 think that there may be the possibility of addressing
6 that.

7 I do think that the recommendations of this
8 review will be important in supporting that effort,
9 though.

10 And I think -- not to pressure you, Mike. I
11 think your knowledge and credibility would be very
12 important.

13 If you're able do it, I would really
14 appreciate if you would work on that with me.

15 JOSEPH K. LYOU: Okay. Dave.

16 DAVID ARRIETA: I just wanted to say that the
17 discussion at the IWG really was two parts.

18 One was the relocation issue, and Secretary
19 Marin or Chairman Marin took it upon herself to really
20 move the issue regarding relocation.

21 And she was very adamant that she was going to
22 make the contact at HUD that was necessary,
23 appropriate, and you know, really take charge on that
24 issue.

25 The other issue was the health effects kind of

1 discussion. And I think it's really important that a
2 community member from this group be part of that --
3 somebody that has experience in health effects issues.

4 And I would recommend that Martha be part of
5 that discussion because I think, if the community is
6 ever going to get any satisfaction, somebody that has
7 that background and that can talk to the community from
8 that perspective needs to be there to evaluate all this
9 process.

10 MARTHA DINA ARGUELLO: (No audible response.)

11 JOSEPH K. LYOU: Martha. We need a verbal response
12 because the transcript will not reflect a head nod.

13 MARTHA DINA ARGUELLO: I'll do it.

14 JOSEPH K. LYOU: Okay.

15 I hope there's no opposition to our two
16 volunteers. Barbara Lee and Martha Dina Arguello are
17 serving as requested by the interagency working group,
18 serving on the Midway Village work group.

19 Diane.

20 DIANE TAKVORIAN: I --

21 SHANKAR PRASAD: I had a comment on the issue of
22 who is being added to that.

23 Both of you will be participating as part of
24 that panel. Am I right? At the same time, we're also
25 providing a list of the scientific technically

1 qualified people to the communities so that they feel
2 comfortable they will become that person.

3 MARTHA DINA ARGUELLO: Okay.

4 JOSEPH K. LYOU: Diane.

5 DIANE TAKVORIAN: I just wanted to second Barbara's
6 request to Mike to consider being on the
7 subcommittee --

8 BARBARA LEE: Barry, would you kick him, please.

9 DIANE TAKVORIAN: -- he has local experience with
10 his experience in these matters.

11 MICHAEL DORSEY: I'll go ahead and participate.

12 JOSEPH K. LYOU: Great. We have three. If
13 that's -- did they limit it to two?

14 DAVID ARRIETA: No. They said at least two.

15 JOSEPH K. LYOU: At least two. So we need some
16 clarification. We'll check on that. Mike as succumbed
17 to peer pressure.

18 BARBARA LEE: Thank you, Mike.

19 JOSEPH K. LYOU: That being said, I think we can
20 move on to our next agenda item, which was a discussion
21 of the cumulative impacts.

22 And for this agenda item, Diane Takvorian and
23 Dave Arrieta have a presentation to make to discuss
24 what role our committee may have on the development of
25 ways to assess and mitigate cumulative environmental

1 impacts.

2 DIANE TAKVORIAN: Also, John is going to --

3 JOSEPH K. LYOU: That's right. I'm sorry.

4 John is going to give us an update on where
5 they are on this process first. You're right.

6 BARBARA LEE: John, are you sure you wouldn't like
7 us to defer your presentation to the next meeting? You
8 have such a good record.

9 JOSEPH K. LYOU: He's only been trying to do this
10 for about nine months now.

11 JOHN FAUST: Thank you for the opportunity.

12 I'm Dr. John Faust, toxicologist from OEHHA
13 Cal/EPA. I guess we can start to with my first slide.

14 This just outlines the key areas that OEHHA has
15 been asked to produce by the EJ action plan, one of
16 which is develop guidance on cumulative impact
17 assessment.

18 Second, we've been asked to look for
19 opportunities and make recommendations for changes in
20 Cal/EPA's policies or statutory or regulatory changes
21 that might be opportunities for introducing cumulative
22 impacts analysis.

23 And finally, since there are a number of pilot
24 projects going on, we've also been asked to provide
25 guidance on how cumulative impacts might be explored in

1 these pilot projects.

2 So at the last time I came to you, I presented
3 a number of documents in the inventory that had come up
4 in terms how cumulative impacts have been considered or
5 what guidance exists already.

6 Some of the most important of them were
7 U.S. EPA's framework for cumulative risk assessment and
8 the national EJ advisory committee's work on cumulative
9 impacts analysis.

10 But what that left us with is that there isn't
11 really a single protocol or procedure that one should
12 follow in doing such an assessment.

13 So what's emerged is that a reasonable approach
14 may be to consider using existing data sources, focus
15 on existing Statewide data sources, which characterize
16 pollutant threats to the public health or the
17 environment and to see how far we can get in
18 understanding what places may suffer disproportionate
19 burden from pollutants or where potential cumulative
20 impacts may be occurring.

21 Towards that end, we need to evaluate the
22 quality and reliability of data sources and also look
23 for appropriate ways to express that information that's
24 understandable and scientifically sound.

25 And with that in mind for the short-term, to

1 also look at filling in our gaps about what we know
2 about interactions between pollutants and how we
3 understand exposures occur and what the nature of
4 disresponse relationships are for various pollutants
5 and so forth -- all the things that make cumulative
6 impacts analysis complex -- and also having an eye
7 towards exploring what constitutes population
8 vulnerability.

9 So on this slide, it basically broke down,
10 since under our definition of cumulative impacts, we're
11 to consider pollutant sources from sources that affect
12 human health and the environment, this is just one way
13 of breaking them down.

14 And also it could be done by media, but I
15 presented it this way here because it's -- reflects
16 more clearly how the State and federal government keeps
17 track of information.

18 So at the top, I have the stationary or point
19 sources, which could include large industrial and small
20 commercial sites, hazardous waste sites, area-wide
21 sources, which might include releases from consumer
22 products or disbursed solvent use, mobile sources, both
23 on road and off road cars, trucks, buses, ships,
24 airplanes, agricultural sources, pesticides, waste
25 discharge, agricultural burning, and finally, domestic

1 sources, which could include exposures from drinking
2 water, food exposures to pesticides, home hazards,
3 indoor air, et cetera.

4 So on this slide, I present the basic human
5 health risk model to illustrate how we think about sort
6 of a continuum from source of pollutants leading to
7 health effects.

8 So at the top, we have a source or a use of a
9 hazard or pollutant. Its release results in an
10 environmental concentration. Human activity in an area
11 where there is an environmental concentration results
12 in exposure.

13 Pollutants are taken up and leading to a dose
14 estimate and interaction with the human body, or the
15 environment creates a health effect or an environmental
16 effect.

17 So -- could you go back just one second -- so
18 this model also reflects a bit about how information is
19 collected, as well.

20 And what we primarily have access to are things
21 that are sort of at the top of this chart where things
22 are coming from, although there are types of data that
23 do get at environmental concentration such as air
24 monitoring or modeled air concentrations for certain
25 toxicants.

1 And we also get a little bit farther down in
2 estimating dose from information like vital monitoring
3 studies. And finally, there are health effect studies,
4 as well, or inventories of health outcomes.

5 But of course, the challenge with those is the
6 degree to which they can be attributed to pollutant
7 sources.

8 So here, I'm just proposing to go through a few
9 Statewide sources of information or federal sources.
10 This is by no means comprehensive, but just gives you a
11 flavor of the types of information that we have access
12 to.

13 One of which is the Community Health Air
14 Pollution Information System maintained by the ARB and
15 perhaps the most comprehensive source of statewide
16 information on pollutants, air pollutants.

17 The system estimates pollutant burden for
18 criteria air pollutants, as well as a number of other
19 air -- toxic air pollutants.

20 And it draws on the emissions inventory
21 developed by the air pollution control and management
22 districts and counties and estimates local levels of
23 air pollutants.

24 Since the data are available district-wide,
25 certain types of pollutants are assigned to a

1 geographic grid in this system, using a process called
2 spacial allocation where population or traffic data are
3 used to make estimates of where pollutants may be
4 occurring.

5 Another source is the toxic release inventory,
6 the result of a right-to-know law, which requires
7 yearly publication on toxic releases of chemicals and
8 other waste management activities.

9 Industries have to meet certain requirements to
10 be included in this database; so it doesn't include
11 everything.

12 And under this program, they report data under
13 the release of over 650 specific chemicals to air,
14 water, or land.

15 DTSC maintains a database of properties where
16 hazardous substances have been released. We're aware
17 the potential for release exists called the site
18 mitigation in Brownfield's Reuse program database.

19 A subset of sites in this database, which are
20 thought to pose the greatest threat to the public in
21 the environment come from a database called Cal Sites
22 and includes what are termed the State superfund sites.

23 The National Priorities List is maintained by
24 U.S. EPA. And its superfund program consists the sites
25 across the U.S. where release of hazardous substances,

1 pollutants, or contaminants are known to have occurred
2 or where there are threatened releases.

3 There's public information about each site,
4 which describes its current status. And new and
5 proposed sites are also included.

6 The Waste Board also maintains the Solid Waste
7 Information System with information on the solid waste
8 facilities operations and disposal sites, and this is a
9 public resource that can be used to make inquiries
10 about local sites.

11 The Water Board manages the Geographic
12 Environmental Information Management System, a data
13 warehouse of information on public drinking water
14 supplies, underground fuel tanks, and fuel pipelines.

15 There is a GIS interface called Geotracker,
16 which allows inquiries to be made about the location of
17 sites of concerns such as looking at underground fuel
18 tanks and their proximity to public drinking water
19 wells.

20 Department of Pesticide Regulation maintains
21 the Pesticide Use Reporting System for pesticides
22 primarily of agricultural and some nonagricultural use.

23 Information includes the products gathered --
24 the product used, the time and place of application,
25 the size of the area treated, and the application

1 method.

2 Pesticide use gridded to the public land survey
3 system is available, which results in information to
4 approximately square mile areas.

5 And the last is the Safe Drinking Water
6 Information System maintained by the U.S. EPA, which
7 has information on public water systems and their
8 violations of drinking water standards.

9 So I put this slide up as to one area where you
10 think about how the data are expressed. Different data
11 sets come with different limitations about how well
12 we're able to resolve information across the geographic
13 areas.

14 And since environmental justice issues are
15 frequently neighborhood to neighborhood, it's important
16 that we do the best we can to identify these
17 differences with confidence.

18 So just as a few examples, California is
19 divided into 58 counties. That's a very low level of
20 resolution.

21 The U.S. Census Bureau provides a convenient
22 way of dividing up the geography at a finer level in
23 addition to providing demographic information about
24 people in those areas.

25 There's over 7,000 census tracts in

1 California,, and these are broken down into smaller
2 block groups and tabulation blocks with about 22,000,
3 and over 5,000 of these in California respectively.

4 Some types of information like the greater
5 emissions or pesticide use data that I mentioned before
6 are assigned to scientific grids which don't
7 necessarily match up with boundaries that -- of either
8 the census bureau or regional boundaries.

9 But those areas are somewhat in between in size
10 between, you know, the larger and smaller of the areas.
11 And other ways that California frequently gets divided
12 up is into air basins or watersheds.

13 So in evaluating a given data source, there's
14 several criteria that need to be considered before
15 determining whether it identifies a contribution to
16 commit a pollution burden and some of these criteria
17 that we look at are put on this slide.

18 First is relevance or representativeness. Does
19 the data source provide information about a threat to
20 public health or the environment? Does it provide an
21 indication of an environmental issue it is meant to
22 characterize?

23 Second, data quality. How complete is the data
24 set? Is it complete enough for doing this statewide
25 comparison, or is it most appropriate at a smaller

1 level? And has the information been updated recently?

2 And does it come from a stable program?

3 Another criteria is sensitivity. Are the data
4 sensitive to differentiate across the geographic areas?

5 And this gets at the level of resolution that I've just
6 been talking about.

7 And finally, benchmark value. Is there a point
8 of reference for the data that makes it meaningful so
9 that its significance can be readily understood.

10 So at this point, our plan is to look at these
11 data sources by the criteria that we've described,
12 looking for how reliable they are for characterizing a
13 contributor to cumulative impacts or potential
14 cumulative impacts.

15 And we want to use these data to -- or express
16 them in an understandable and scientifically sound
17 manner.

18 And this process is going to reveal gaps. That
19 is, we're going to know what we have covered and what
20 we don't have covered.

21 And I think that will be an important part of
22 the process. So towards this end, we want to form a
23 representative work group to look at these issues or to
24 help guide us, provide an exchange of information.

25 The composition that we propose to use is going

1 to be representative with government, community,
2 business, and academic interests invited to attend.

3 Participation is planned to be open and, most
4 likely, will use the conference calls format. And it
5 would also be most desirable to have a recurring
6 meeting schedule somewhat more frequent than this body
7 meets, for example.

8 So another opportunity for interaction on the
9 subject of cumulative impacts comes with the local
10 advisory groups that exist already for the pilot
11 projects, and I expect participation at that level, as
12 well.

13 So if there's any questions.

14 JOSEPH K. LYOU: I'll actually start off with a
15 couple things. I thank you for a excellent
16 presentation. I know you've many months to hone it and
17 perfect it. I'm glad we finally got to this.

18 I think this is a wonderful framework for
19 looking at this very complex issue. I have very minor
20 comments, one of which is that I would like -- and I
21 think Shankar will do this -- distribute copies of your
22 slides to the members.

23 And I would encourage Cal/EPA to post your
24 slide on the website for the pilot projects because
25 people get a very good idea how much progress you've

1 made developing this framework.

2 In terms of data resolution, I found often
3 what's very important for me from a practical level is
4 to actually have political districts in terms of
5 assembly and State district information so that if
6 we're talking about a stationary source or a -- some
7 type of landfill or something, that we know which
8 district it is in.

9 Because it's very helpful to have that
10 information when you're trying to address your
11 government for -- redress your government for
12 grievances, which is our constitutional right.

13 And also, you didn't have -- you had counties.
14 You didn't have cities. And sometimes it's helpful,
15 both for the same reason -- a city is a political
16 district and helpful to know.

17 And in terms of data quality, I think one thing
18 I didn't see up there was the question of whether the
19 data have been validated or triangulated by other data
20 sources so that we have more confidence in data that's
21 been collected in different ways by different people
22 and also says the same thing.

23 I think there have been some studies showing in
24 other parts of the United States that, for example,
25 what's reported in TRI releases versus what's monitored

1 downwind did not add up. And so there were some
2 questions about data validity.

3 That was it in terms of my comments. And I
4 think Bill has got a comment next.

5 WILLIAM JONES: Just in terms of this group that
6 you want to put together, I'm assuming you want to
7 extend that to others -- other folks other than just in
8 addition to this committee.

9 I have a couple folks that I think might be
10 interested from our Department of Health Services, our
11 toxics epidemiology group.

12 How do you think we can go about inviting them
13 into this particular effort? I mean, I can make the
14 contact and get ahold of you or --

15 JOHN FAUST: That would be fine. I'm assembling a
16 list of names and emails.

17 WILLIAM JONES: Okay.

18 So would you be sending out like an invite
19 letter to these folks that I might put in contact with
20 you.

21 JOHN FAUST: Yes.

22 WILLIAM JONES: Maybe you can give me a card or
23 something.

24 JOHN FAUST: Okay. Absolutely.

25 JOSEPH K. LYOU: Any other questions or comments?

1 Dave.

2 DAVID ARRIETA: Regarding that group, I think the
3 process that Cal/EPA has been using to announce
4 meetings and all that, I think that would be a good
5 system for Dr. Faust to announce the formation of this
6 group and invite people and, you know, get as much
7 information out there as possible.

8 I know, from the business perspective, it makes
9 my job a whole lot easier to get people interested if
10 there's a formal announcement that this is going to
11 happen and that there are going to be meetings.

12 That way, people take it seriously rather than
13 me telling them OEHHA is thinking about doing these
14 things, and you ought to be involved.

15 If it's more formal, it makes it more -- easier
16 to get people involved.

17 JOSEPH K. LYOU: Mike, I think, was next, and then
18 Martha. I'm not sure which one was first.

19 MICHAEL DORSEY: I just concur with what David
20 said, particularly given the fact that this particular
21 group that I think Dr. Faust is putting together has to
22 have a broad section of expertise to be involved
23 because there's a tremendous amount of various
24 expertise needed for the various impacts that we're
25 talking about.

1 So I think a formal announcement somehow to
2 solicit participation would be very helpful.

3 JOSEPH K. LYOU: Yes. Absolutely. And to get to
4 the people who are responsible for collecting the data
5 so that if there's questions about the data, they can
6 help resolve them.

7 Sometimes we think there are faults or problems
8 that actually are just handled in a manner that we
9 don't understand because we're seeing the end product
10 instead of the process.

11 Martha.

12 MARTHA DINA ARGUELLO: Never mind.

13 JOSEPH K. LYOU: You're begging off? Wait a
14 minute. We should mark this point in history.
15 Seriously?

16 MARTHA DINA ARGUELLO: Well, one question.

17 No. I just think that, depending on the size
18 of the committee on a conference call, it tends to be
19 complicated. I thought, you know, there's ways to
20 structure.

21 We do a lot of calls when there's many, many
22 people on it. We structure a conversation with
23 speakers, and then you open it up.

24 You know, if you have more than five or six
25 people on a call, it's difficult to actually have

1 people participate.

2 So -- but I've been working with him so --

3 JOSEPH K. LYOU: You have confidence it's going
4 work out okay?

5 MARTHA DINA ARGUELLO: I think so.

6 JOSEPH K. LYOU: Okay.

7 So I think what we'll do is hold off on public
8 comment until we do the presentation from the members
9 of the committee and then do public comment on this
10 whole agenda item.

11 So Diane and Dave, you guys are up.

12 DIANE TAKVORIAN: Thanks.

13 Thanks, John, for not only the presentation
14 today but all of the hard work that you've been doing
15 and in trying to advance what I think has been one of
16 the key recommendations from the CEJAC 2003 report,
17 which is to advance cumulative impacts assessment for
18 environmental -- in an environmental justice setting
19 and culture.

20 We had a protocol committee meeting that David
21 and I participated on with Shankar and Malinda, and
22 John joined us in that call.

23 And we had a conversation at your direction
24 about how to advance cumulative impacts on two paths at
25 one time.

1 We were looking at the good work that John is
2 doing and the path that he's on in order to develop the
3 models, assess the data that currently exists and also
4 looking at the timing and trajectory of that and the
5 resources that are needed for that effort.

6 And then, also, looking at the fact that we
7 have communities that clearly suffer from cumulative
8 impacts, but there's no real way to get at those
9 communities and begin addressing those issues.

10 So we wanted to present a few thoughts to you
11 and hope to have a little bit of a committee discussion
12 about that towards another proposal that we have.

13 So just to remind you that the definition that
14 we adopted, we recommended and then IWG adopted in
15 February is this one, that cumulative impacts means
16 exposures, public health, or environmental effects from
17 the combined emissions and discharges in a geographic
18 area including environmental pollution from all
19 sources, whether single or multimedia routinely,
20 accidentally, or otherwise released impacts will take
21 into account sensitive populations and socioeconomic
22 factors where applicable and to the extent data are
23 available.

24 My recollection is it took us quite a while to
25 reach this conclusion, but I think that despite all

1 that, it was -- it took quite a while because this
2 means a lot to all of us, that we all take this very
3 seriously.

4 And that we believe this is a critical
5 component of our environmental justice work. So one of
6 the things is that we thought that the pilot projects
7 would be a good opportunity to examine cumulative
8 impacts, methods, and opportunities.

9 What we thought was that we might have the
10 opportunity to develop methods, identify data gaps, and
11 begin to conduct preliminary analysis.

12 What we're finding is that that may be true,
13 but it may be that the pilot projects are really
14 limited to one medium.

15 So if you look at the ARB or the DPR pilot
16 projects -- and this isn't necessarily a criticism --
17 but the fact is, as we look at the workload, we begin
18 to look at what can these pilot projects really
19 achieve.

20 And it may be that it's very, very limited to
21 one medium. So we -- we think one of the constraints
22 is that, both, we don't have the resources, as I think
23 Shankar said earlier. Each of the pilot projects is
24 working off of a limited budget.

25 They are having to narrow their scope and their

1 focus and so they -- we really can't expect necessarily
2 that they'll be able to address the cumulative impacts
3 analysis in the way that we hoped.

4 And Cal/EPA isn't that helpful -- I'm sorry --
5 in the sense that they don't have the resources and
6 data that can just be plopped into the pilot projects.

7 So these are some of the data issues that we
8 talked about in our call that are data issue
9 constraints, but they also then translate to resources
10 in that, if you have more resources, you can overcome
11 some of these constraints.

12 So we also -- it leads to this, which is that
13 not having these resources, not -- I mean, John can do
14 wonders, but John's one person. And my understanding
15 is he has a couple other things to do besides the
16 cumulative impacts.

17 So he's -- in addition to the fact that we
18 don't have the money, cash, and other personnel to help
19 out with that.

20 So how do we achieve the efforts that -- or how
21 do we advance the efforts that we want to achieve given
22 these constraints.

23 So our proposal is that we begin to look at
24 these elements of cumulative impact analysis in a
25 parallel and, hopefully, sometimes integrated process

1 with the one that John is proposing so that we're
2 looking at multiple stressors, trying to figure out a
3 way that we can move, even if it's in a small way,
4 around cumulative impacts, make sure that the community
5 is involved and maybe involved in the participatory
6 research, that we be efficient about it, that we
7 understand that cumulative impacts could be a huge,
8 long, decades long process, but that we try to figure
9 out ways to be efficient with that, using the existing
10 sources and regulations that we have and achieving
11 significant reductions in risk and exposure.

12 So our recommendation is that we establish a
13 cumulative impacts subcommittee to address these three
14 key questions: How should data limitations and
15 incompatibilities be addressed, how can Cal/EPA ensure
16 adequate resources, and then what opportunities are
17 available to Cal/EPA for action in the short and long
18 term.

19 So how can we move forward is really what that
20 recommendation is about, and it just restates it. So
21 actually, we go back to the -- sorry -- to the second
22 to the last. That's our proposal, David, if you want
23 to add in.

24 DAVID ARRIETA: No. I think you did a good job of
25 describing what we went through and where we're at.

1 JOSEPH K. LYOU: Barbara, do you want to make a
2 comment now? We're going to go at some point. This is
3 a proposal.

4 I guess it's going in terms of a motion to form
5 a subcommittee. Then we'll go to public comment after
6 that, I guess.

7 BARBARA LEE: I think the proposal is a good idea.
8 I do think that we need to mark a bit of time, at the
9 end after we take up the proposal, to talk about this
10 resource issue.

11 It seems to me that we might, as a committee,
12 be able to lend some support to Cal/EPA and their
13 search for additional funding in the budget process or
14 perhaps with leaders in the legislature, if the
15 committee can come to some consensus on how we might go
16 about doing that.

17 And I think, if we can articulate a couple key
18 things that need to be worked on from an environmental
19 justice perspective at Cal/EPA like the cumulative
20 impacts process, if we can come up with somewhere
21 between two and four items that needs some specific
22 funding, I think that with the support of the committee
23 and some dedicated effort on behalf of the committee
24 members approaching Alan and -- as a representative of
25 the administration, as well as some key members of the

1 legislature who are going to be deciding budget issues
2 in the coming year, we might be able to, you know,
3 crack this nut open a little bit and get some dedicated
4 funding for environmental justice efforts.

5 And it would be my hope that, if we're
6 successful in that, there might be -- it might improve
7 the relationship also between this committee and the
8 BDOs because we will not be asking them to do more work
9 with no funding.

10 We will be asking them to use the funding we've
11 helped them get in a better way; and so I think this
12 might be a positive solution for us.

13 JOSEPH K. LYOU: Antonio.

14 ANTONIO DIAZ: Well, first you all, I want to thank
15 David and Diane for giving thought to these important
16 questions and Dr. Faust for his presentation. I think
17 we're on a good path.

18 Just in terms of moving forward with this
19 recommendation, actually, I would move that we adopt
20 the recommendation to establish a subcommittee, A human
21 impacts subcommittee to address the issues that are
22 identified on the screen.

23 JOSEPH K. LYOU: Do we have a second?

24 LENORE VOLTURNO: I'll second it.

25 JOSEPH K. LYOU: We have a second.

1 We should have given opportunity for public
2 comment on this item before we move forward with the
3 discussion and a vote.

4 Are there any members of the public interested
5 in addressing either the presentation by Dr. Faust or
6 the proposal before the committee?

7 Penny, do you want to join us?

8 PENNY NEWMANN: I just wanted to point out that
9 there's probably a database that needs to be developed
10 that we don't have listed, and that is some of the
11 other resources that might be available.

12 For example, in our community, we are
13 partnering with USC in their children's asthma study in
14 which we have our Promitoris (phonetic), our SALTA
15 (phonetic) graduates actually going out and doing
16 measurements around schools, doing a community
17 diagnosis in which they are looking at various areas in
18 the community and identifying facilities that there
19 are, what types of impacts are hitting upon that and
20 augmenting the database that USC currently has, which
21 because of the time needed to gather data are usually
22 outdated, at least, as far as our communities go, that
23 it's so quickly developing that everything is about two
24 or three years behind the curve.

25 And so that information is now being plugged in

1 to USC's GIS program to kind of track some of that, and
2 I think that it's not costing -- I mean, this is a
3 community-based effort.

4 And so I think that's one of the resources that
5 the community brings to it is that they really do know
6 their communities, and they understand what's
7 happening.

8 And that information can be extremely valuable
9 as we're trying to see and identify some of this and
10 expand our database.

11 So you know, I see that as one of the things
12 coming out of the pilot programs that can be very, very
13 helpful is that kind of community expertise and
14 knowledge to it.

15 JOSEPH K. LYOU: Bill --

16 Do you want to change the tape before we do
17 this?

18 JEANINE TOWNSEND: No.

19 JOSEPH K. LYOU: All right. Bill.

20 WILLIAM JONES: Just two comments.

21 First of all, I hear two groups being formed
22 here, and I'm concerned about these two groups kind of
23 going on different directions or in different
24 directions.

25 So somehow we have to connect the two groups

1 together, either by participants or by some method of
2 keeping them on track talking to each other because if
3 we go in different directions, it's going to be a mess
4 to clean up.

5 And the second comment or question, really, is
6 in your investigation, in your analysis, has NEJAC done
7 anything along these same lines?

8 Or has NEJAC addressed some of the issues
9 you're proposing here in any form or in any way.

10 DIANE TAKVORIAN: Can I just say one thing to
11 answer that NEJAC question, but I think that your point
12 is a really good one, and I think probably what we
13 should say is that this committee -- the subcommittee
14 we're proposing should really deal with bullet points
15 two and three, primarily, that it's a resource
16 question.

17 And I think that the working group that John's
18 proposing is more of a model development data analysis
19 committee so that they should absolutely be integrated.
20 And John's kind of the integrating factor there or the
21 linchpin, if you will.

22 But I don't think they're going to deal with
23 how do we get resources to Cal/EPA and to this effort
24 for on-the-ground work.

25 And that's the key thing, and I probably didn't

1 say that clearly.

2 WILLIAM JONES: Can I just make one comment to
3 that.

4 We talked about the other group going to
5 Cal/EPA with concerns and issues. It seems like this
6 is something that you can also bring to that same table
7 instead of forming another group to go to, you know,
8 Cal/EPA and the BDOs.

9 It seems like, if you just enjoin them -- I
10 mean, yeah. We're forming groups and committees and
11 all this, but maybe we can bring a couple of those
12 together -- the one that we formed this morning and the
13 effort that you want to put forward here in order to
14 address the resource issues, bring it to Cal/EPA at the
15 same time.

16 It's just an idea.

17 JOSEPH K. LYOU: I think Shankar wanted to make a
18 clarification with regard to NEJAC.

19 SHANKAR PRASAD: This year, I've been appointed to
20 be NEJAC as a member. And this year, they charge me
21 for the next 14 months is exactly to look at what the
22 future activities and how the U.S. EPA should focus
23 upon.

24 Because to an extent, they selected to be
25 charged -- they have agreed that there has been an

1 acknowledgment and awareness in spite of the amendment
2 to dismiss concern.

3 But in terms of the activities that have been
4 taken place or the progress that has been made, both
5 the community at large, public at large, as well as
6 some of the units within U.S. EPA feel not much has
7 happened.

8 So in that context, how this better NEJAC has
9 to exist, continue in existence or not is one of the
10 charges. And there, that is to see how progress can be
11 measured or what are the recommendations.

12 WILLIAM JONES: One other thought.

13 If -- if somebody in that process could explore
14 EPA grants, you know, as a possibility, that would be
15 helpful, too.

16 JOSEPH K. LYOU: David and Antonio both seemed
17 interested.

18 DAVID ARRIETA: In our discussions with Diane and
19 Shankar and with Dr. Faust, we kind of saw the other
20 committee being more -- a more technical evaluation of
21 issues.

22 And what Diane was recommending more of a --
23 what's the word -- practical evaluation of issues, more
24 a community-based exercise to address what might be
25 done in the shorter term to look at ideas, try to deal

1 with cumulative impacts, you know, identifying shorter
2 term or longer term, what are communities that get --
3 that are being impact cumulatively, what are the data
4 gaps, what are the potential things that could be done
5 to address those kinds of things on the shorter term as
6 opposed to, you know, a more scientific rigorous
7 exercise of is the data being collected correctly, is
8 it being evaluated correctly.

9 Those kinds of things are more what the other
10 group would be doing. The other thing was that the way
11 I envisioned it kind of like Jim Martin's committee,
12 which is he kind of leads the exercise.

13 What would be a Cal/EPA led exercise in both
14 cases with input from this committee and others as
15 appropriate on both sides of the two committees.

16 So anyway, that's kind of the thinking that
17 Diane and I discussed. It's been a while now.

18 JOSEPH K. LYOU: Antonio.

19 ANTONIO DIAZ: David addressed the point.

20 JOSEPH K. LYOU: Okay.

21 Shankar, did you have an opinion about -- I
22 mean, is there clarity for you in this would work for
23 Cal/EPA.

24 SHANKAR PRASAD: I'm sure they said would be
25 Cal/EPA effort.

1 I'm not sure as to what it means. So I brought
2 this up with the four people. You would have three or
3 four -- whatever number of people would be sort of
4 forming specifics, and each time, you would discuss on
5 that issue.

6 But I don't think we got into the specifics of
7 what it would be. And I thought the framework of the
8 discussion would be there is a limitation of resources,
9 but what are the questions of choices. We have options
10 we have -- in order to get more resources either
11 internally or externally.

12 And another issue that we specifically thought
13 was, well, cumulative impacts, well, this development
14 is going along.

15 In two year's time, there might be a
16 methodology available, but right now no legal mandate
17 in order to apply cumulative impacts, either in a given
18 community on a given permanent action.

19 So how do we go about getting blocks of
20 thinking in that direction as to what those steps
21 should be initiated. So it's more of in that context
22 we were talking.

23 So I thought this subcommittee should sort of
24 prioritize and have a series of sets of presentation
25 like we thought in what are the legal barriers.

1 Then somebody should come into the question --
2 somebody from Cal/EPA to make the presentation of those
3 legal barriers and sort of go about what are the next
4 steps if we want to take any corrective action.

5 Am I right, Dave? Are we thinking something
6 different?

7 DAVID ARRIETA: No. I think you're right. The
8 issue is -- has got to be some sort of Cal/EPA
9 involvement.

10 You know, we don't want to get into the same
11 position that we had with the LAGs on the ARB project
12 where ARB wasn't part of the discussion on the
13 recommendations, and they didn't agree with them.

14 And I think that if we're going to move the
15 ball forward in cumulative impacts, obviously Cal/EPA
16 is going to be the implementer of whatever we come up
17 with. They've got to be part of the process.

18 And if we're going to take small steps, they've
19 got to be there to help us with what the steps are.
20 You know, no sense in us recommending something that
21 Cal/EPA says is not doable, not practical, not in this
22 lifetime, you know.

23 We need their input, their guidance on what's
24 doable and what isn't doable and, you know, what the
25 committee's input as to what needs to be done.

1 JOSEPH K. LYOU: We have Susan and then Bob.

2 SUSAN GEORGINO: Well, I agree with everything
3 that's being said. But I want to bring a word of
4 caution to this whole thing.

5 You said that Cal/EPA would be the implementer.
6 In point of fact, the implementer will be local
7 government because they're all land use decisions.

8 If you want to cut down cumulative impact,
9 you've got to cut it down based on local land use
10 decisions and the difference between projects that come
11 before local government that are discretionary where
12 Cal/EPA necessarily has a role with respect to
13 environmental impact reports and where no one comes
14 into play except local government with nondiscretionary
15 projects and nondiscretionary businesses that come into
16 our community.

17 So anything that starts talking about
18 cumulative impacts really, really has to engage local
19 government at a very significant level.

20 So I was very happy when Joe suggested also
21 that designation had to be there with respect to cities
22 and counties.

23 JOSEPH K. LYOU: Bob, if you hold off one second,
24 we'll change the tape.

25 (Off the record.)

1 JOSEPH K. LYOU: Okay, Bob.

2 ROBERT HARRIS: Thank you very much.

3 Somehow I just fundamentally fail to see how
4 the subcommittee can really carry out this function.
5 Pursuant to what has been said previously and how it's
6 phrased just seems to me this is a question, if we want
7 answered, we have to pose directly to Cal/EPA and ask
8 them to affirmatively respond to this particular
9 question.

10 Otherwise, it just seems the subcommittee is
11 going to be wasting it's time because, fundamentally,
12 those two last bullet points can only be answered by
13 Cal/EPA.

14 JOSEPH K. LYOU: I assume Diane wants to respond.

15 DIANE TAKVORIAN: I think it's -- I would just
16 disagree slightly and say I think only Cal/EPA cannot
17 participate in that but that what we've seen is that
18 Cal/EPA may not have the resources to actually address
19 these questions.

20 So I think maybe another way to say this is to
21 say that we're recommending that the CEJAC step up with
22 a cumulative impact subcommittee that would directly
23 address the resource and data issues that Cal/EPA has
24 in order to provide a series of recommendations that we
25 would hope that Cal/EPA would take on.

1 So it's a long way around to saying we're not
2 seeing those recommendations coming out of the Cal/EPA
3 administration now as a result of lack of resources.
4 So our view was let's step up, try to put together a
5 package.

6 I mean, Barbara said something very specific
7 right away in terms of kind of things that we could put
8 forward, come back here, see how it resonates with all
9 of you.

10 And I imagined -- back to somebody's point --
11 that you responded to, Shankar, that you would be a
12 part of this because I think we do need the
13 administrative avenue on this.

14 And that John's holding down the technical
15 path, but that we need to figure out what resources and
16 legal challenges we have in order to figure out what's
17 out there that we could bring in.

18 So we're willing to really get our hands dirty
19 in trying to figure out how we get those resources into
20 the agency.

21 ROBERT HARRIS: I'm not disagreeing necessarily
22 with what you intend to do.

23 But it seems to me to run counter to what I was
24 reading yesterday in terms of what our charge is and
25 the bylaws themselves recommend policy recommendations.

1 Here, you're asking how should they allocate
2 resources, which theoretically is a good question. I'm
3 just not certain whether or not a subcommittee here is
4 the proper body to do that other than stay within our
5 own charge.

6 JOSEPH K. LYOU: Barbara, go ahead.

7 BARBARA LEE: Let Barry go ahead.

8 JOSEPH K. LYOU: Okay. Barry, go ahead.

9 BARRY R. WALLERSTEIN: I think the issue of
10 resources is, frankly, critical to the mission
11 statement of this group relative to what goes on at
12 Cal/EPA.

13 A couple of meetings ago, we didn't have an
14 attorney assigned. We couldn't do X, Y, Z because
15 there weren't resources.

16 We're hearing earlier today, ARB's decision may
17 have been based in part on resources. All of us that
18 manage functions or manage agencies know that you have
19 limited resources. You have to create priorities.

20 But if you don't commit resources to an
21 activity, frankly, at some point, you may as well not
22 be doing the activity. So to me, it's fair game.

23 Bob, if you're concerned about just a
24 subcommittee doing it, then I wouldn't personally
25 object that you create a subcommittee, let them go have

1 their discussion with Cal/EPA and come back and report
2 to the full committee here, and then have the full
3 committee take action on the recommendation to Cal/EPA
4 if that gives you --

5 JOSEPH K. LYOU: I think that's our understanding
6 how the subcommittees would function anyway.

7 BARRY R. WALLERSTEIN: Okay.

8 So I don't know why that doesn't work.

9 JOSEPH K. LYOU: Barbara.

10 BARBARA LEE: My -- the reasons I wanted to wait
11 until the end of that discussion is that I am
12 supportive of the subcommittee process that Diane
13 suggested.

14 I think recommending -- identifying what
15 resources are needed for this specific process on
16 cumulative impacts is important.

17 And to really understand, you know, what
18 Cal/EPA needs to do will take some time. And I think
19 the subcommittee process has to look at what's needed
20 and how it should be deployed, in our minds, I think,
21 is fair and reasonable.

22 I do think it is important to have the BDOs'
23 input in that because we definitely want to come up
24 with recommendations that can interface with what they
25 do and not be so out of sync that there's -- that we're

1 going to get another "sorry, no can do," as Diane
2 pointed out.

3 What I was referring to, at the beginning of
4 our discussion as a committee after Diane made her
5 presentation in terms of resources, is I think
6 something we need to do in a shorter time frame
7 probably than what this subcommittee will be looking at
8 and will be less detailed.

9 I think, to help Cal/EPA keep moving, we -- on
10 environmental justice issues that are important to this
11 committee, to the communities, to everyone involved in
12 environmental justice, they need some funding for this
13 effort, and they need it in this upcoming budget.

14 And this upcoming budget is being prepared now,
15 and it's probably nearly finished. And in December or
16 January, it is finished, and then it's the public
17 debate.

18 And if we want something in that process, we
19 need to make a recommendation on that now. And my
20 suggestion is we need to identify a couple key areas of
21 activity like cumulative impacts.

22 And we need to figure out what a reasonable
23 amount of money is to look for and talk with Alan
24 about, and I would suggest we add it as a discussion
25 item that this small group will have with him on the

1 other issue.

2 I think we need to find out from him what is,
3 in his mind, the most productive way we can work to get
4 money in the budget. It would be great if it came in
5 through the governor's budget.

6 If it can't come in through the governor's
7 budget, what is the next best way to get it into this
8 year's budget?

9 And even if it isn't enough to fund all the
10 activities that are going to need to happen in the
11 upcoming years, at least having some funding dedicated
12 to environmental justice activities at Cal/EPA in the
13 budget will ensure that we get past the pinch point
14 that we're in right now.

15 So I think it's supportive of what you're
16 doing, Diane, but it is a separate thing and something
17 we need to do quickly as opposed to through a
18 subcommittee process.

19 JOSEPH K. LYOU: Have all the budget change
20 proposals been submitted? I mean, in October or
21 September?

22 BARBARA LEE: September or August.

23 SHANKAR PRASAD: Yes.

24 BARBARA LEE: So we're looking to amend something
25 that is almost finished.

1 I would imagine the governor will be releasing
2 it in December or early January would be his intent.
3 And so if we want to get anything in it, we have to go
4 really fast.

5 SHANKAR PRASAD: Realistically speaking, I think
6 that cycle of adding that revision at this point is
7 maybe too late.

8 I think what we're looking at a couple months'
9 time frame, and that would include a stronger proposal
10 and include it as one of the -- on the budget language
11 kind of opportunity.

12 JOSEPH K. LYOU: I don't think anyone is
13 disagreeing with Barbara.

14 Bill, do you have a comment or are you just
15 trying to shake your card at me?

16 WILLIAM JONES: I'm just shaking.

17 BARBARA LEE: Since I'm not sitting in a chair
18 position right now, I'd like to make a motion that we
19 add the funding discussion -- formally add that as an
20 item to be discussed with Dr. Lloyd and BDO department
21 heads when the group that is meeting with him meets
22 with him in order to get feedback from him on how best
23 to interface with their process.

24 I don't want this to seem like a hostile act on
25 our part. It is not hostile. It's supportive.

1 ROBERT HARRIS: I second it.

2 JOSEPH K. LYOU: We have a motion on the table
3 already that we haven't voted on.

4 Is this to amend that motion or substitute the
5 motion or --

6 BARBARA LEE: No. Separate motion.

7 Take care of the motion first.

8 JOSEPH K. LYOU: We should take care the first
9 motion, which was a motion by Diane -- or was it
10 Antonio -- by Antonio to form the subcommittee to deal
11 with these three issues -- the data limitations and
12 incompatibilities.

13 But if I understand it correctly, to focus more
14 on the resource issues in the short term and long term
15 opportunities for Cal/EPA action on cumulative impacts.

16 Are there any other comments on that motion
17 that's on the floor now?

18 LENORE VOLTURNO: I have more of a question,
19 actually.

20 And that is, the data limitations and
21 incompatibilities, at what point is that going to be
22 addressed as part of that subcommittee, or is it going
23 to be a part of another subcommittee?

24 JOSEPH K. LYOU: I think the idea was to make sure
25 there was close collaboration with OEHHA's process in

1 order to make those recommendations.

2 I think the charge of the subcommittee, if I
3 understand correctly, would be to come back to the full
4 committee with proposed recommendations that have been
5 worked out in close collaborations with Cal/EPA.

6 LENORE VOLTURNO: I just want to clarify. I'm a
7 little confused about the data limits -- the first
8 bullet point up there, is that going to be included in
9 this subcommittee for discussion?

10 JOSEPH K. LYOU: Yes.

11 LENORE VOLTURNO: It's just not going to the
12 primary focus then.

13 JOSEPH K. LYOU: Right. That's my understanding.

14 LENORE VOLTURNO: Okay.

15 DAVID ARRIETA: The way I understood it, Diane, was
16 the technical exercise is going to be going on over
17 there.

18 This point was what can you do in spite of
19 having data limitationS, in spite of having
20 incompatibilities. What can you do in spite of all
21 those issues.

22 The other discussion is supposed to be how do
23 you eliminate all those things. How do you --

24 DIANE TAKVORIAN: Address.

25 DAVID ARRIETA: -- get the data done right. How do

1 you make the system all do it right. But that may take
2 years and years.

3 The discussion that Diane was having was you
4 recognize all that. What do you in spite of it. How
5 do you make cumulative impacts, move analysis, or
6 mitigation, or whatever, move forward in spite of the
7 fact that you have problems with data, that you have
8 problems with it -- incompatibility -- problems with
9 resources.

10 Is there a way to move the ball forward?

11 LENORE VOLTURNO: That's more of a long-term
12 approach, then?

13 DAVID ARRIETA: No. More of a short term
14 approach --

15 LENORE VOLTURNO: But the data limitations will be
16 more long term in how to address, in spite of that,
17 would be short term.

18 DAVID ARRIETA: Yes.

19 JOSEPH K. LYOU: Bob and then Diane.

20 ROBERT HARRIS: Yes. I just want to make clear, my
21 objection and vote against this motion is based on the
22 last two bullets.

23 I fully support the motion as related to the
24 first bullet.

25 JOSEPH K. LYOU: Diane.

1 DIANE TAKVORIAN: Just to address Lenore and then
2 David's thought, maybe what we should do is reorder the
3 bullets just so that -- because I think what you laid
4 out, David, it's occurring to me maybe in our
5 thinking -- you know, when you're staring at these
6 power points and having conference calls.

7 I think maybe we're looking at what are the
8 opportunities that are available for Cal/EPA action
9 would be, number one, how can we ensure adequate
10 resources to be available to do those actions.

11 And then third, how do we address these data
12 limitations and incompatibilities that may frustrate
13 our abilities to do that?

14 I mean, just as we have had this discussion, it
15 seems that's how it flows. And maybe that would make
16 more sense when we look at it in the future.

17 Antonio, what do you think?

18 JOSEPH K. LYOU: Okay.

19 ANTONIO DIAZ: That's fine.

20 LENORE VOLTURNO: That would make it more of an
21 priority.

22 JOSEPH K. LYOU: All right. Bill.

23 WILLIAM JONES: I just had a question.

24 We're talking about resources and things like
25 that. OEHHA gave a presentation and put forth the

1 motion to where the idea of forming a committee.

2 I still don't know what their committee or
3 their resource issue is relative to them getting
4 involved with that whole effort.

5 And secondly, we've talked about that first
6 group, you know, short of enjoining this concern of
7 resources, bringing it forth to Cal/EPA.

8 Are you comfortable with that idea?

9 DIANE TAKVORIAN: I think the short answer --

10 WILLIAM JONES: Because then you can do it together
11 and pass it because it is an issue of what the focus
12 priority of this group is all about.

13 And if we choose or we vote to say that this is
14 one of the things that we want to focus on, it goes
15 hand in hand with that whole discuss.

16 DIANE TAKVORIAN: Right. Well, I think one of the
17 opportunities is to move forward on the technical
18 analysis that John and OEHHA have started.

19 And so that's both the short and long-term
20 opportunity that we don't have resources for really.

21 So I mean, one answer is there. So we have to
22 be integrated with what they are doing. But there's
23 other on-the-ground opportunities that we want to take
24 advantage of, as well.

25 So it has to be integrated. I don't think we

1 can go on these paths without talking to each other.

2 SHANKAR PRASAD: I think, if you're asking as a
3 resources issue, if I may, John will not be the right
4 one to be able to answer that question or be hesitant
5 to answer, though he would know it.

6 And the reality, as we said earlier, everything
7 we are trying to do is carving out to something. So we
8 are now being questioned are you -- you are trying to
9 do an amendment to this activity of pursuing the NEJAC
10 action.

11 That's not demanding. You're missing something
12 here. So in essence, we're carving out of whatever we
13 have that is focused on some things.

14 For example, they are monitoring park, which
15 got expanded from 2 components to about 14 or 17
16 components and on a different scale.

17 Some of them, monitoring has to close or site
18 has to suffer. That's part of the requirement and
19 demand.

20 So in one way or the other, we're kind of -- so
21 that is the extent of resources that limited resources
22 we have in each of these areas.

23 So that's the challenge. And since it is not
24 the heads of department are here, they will not be --
25 not able to hear that answer from the staff.

1 JOSEPH K. LYOU: So I don't see any other
2 questions.

3 And Bob's concerns about whether the
4 appropriateness of the subcommittee approach, not
5 withstanding, I think everyone agrees that cumulative
6 impacts is a very high priority for environmental
7 justice purposes.

8 And it does need to be made clear to Cal/EPA
9 that we all agree that this is something we need to
10 work together on to move forward as quickly as possible
11 and probably on two tracks -- a long-term and
12 short-term.

13 So having no other discussion, we'll take the
14 vote.

15 All in favor say aye.

16 COMMITTEE MEMBERS: Aye.

17 JOSEPH K. LYOU: All opposed.

18 ROBERT HARRIS: No.

19 JOSEPH K. LYOU: Motion carries.

20 Believe it or not, folks, we do have something
21 that Barbara wants to bring up, but just in terms of
22 timing, we're actually ahead of schedule, I think.

23 DIANE TAKVORIAN: You guys are good.

24 BARBARA LEE: Even though it's starting late.

25 JOSEPH K. LYOU: So Barbara did have another

1 motion.

2 If you're going to form a subcommittee, there's
3 a membership question, as well.

4 BARBARA LEE: Sure. Go for it.

5 JOSEPH K. LYOU: I'll be the first to raise a hand.
6 I would love to be a member of a subcommittee on
7 cumulative impacts.

8 It is a very high priority policy issue for our
9 organization, and I'll be the first to volunteer.

10 I don't -- I don't know -- I think the
11 requirement is that we have a representative
12 subcommittee in terms our bylaws; so let's hope we can
13 do that through volunteers who would be willing to
14 serve.

15 DAVID ARRIETA: I'd volunteer.

16 BARBARA LEE: Dave.

17 JOSEPH K. LYOU: Okay.

18 BARBARA LEE: Diane.

19 JOSEPH K. LYOU: Antonio.

20 Local government. Did that hand go up?

21 BARBARA LEE: It did.

22 JOSEPH K. LYOU: Reluctantly. I saw that.

23 BARBARA LEE: With great reservation about time
24 constraints.

25 JOSEPH K. LYOU: We have now Dave, Diane, Antonio,

1 Barbara, Shankar, and myself.

2 Is there anyone else? Susan?

3 DIANE TAKVORIAN: Susan. I made an eloquent pitch
4 to you.

5 JOSEPH K. LYOU: Susan, you kind of walked right
6 into that one.

7 DIANE TAKVORIAN: I didn't say that but I think the
8 land use issues are so critical.

9 JOSEPH K. LYOU: Absolutely.

10 BARBARA LEE: Would it be -- I don't know if,
11 within our structure, we can do this, but I am aware
12 that the South Coast has a fairly comprehensive
13 initiative underway on cumulative impacts.

14 I'm not asking Barry to participate in the
15 subcommittee after hearing his squeaks earlier when
16 pressured to attend a meeting, but I'm wondering if it
17 would be unreasonable to ask him to have one of his
18 staff people who is leading that effort available to us
19 if we have questions about what's being done.

20 JOSEPH K. LYOU: I also participated in the
21 cumulative impacts reduction strategy work group
22 process with South Coast for eight months, and I have
23 some knowledge of that.

24 But if a staff person was available to -- yes,
25 that would be great. I think he nodded, which will be

1 reflected in the record.

2 BARBARA LEE: Let the record show --

3 BARRY R. WALLERSTEIN: It was an up-and-down nod.

4 JOSEPH K. LYOU: In the affirmative.

5 BARBARA LEE: Barry agreed.

6 SHANKAR PRASAD: I was hoping actually that Dr.
7 Wallerstein would step up and be a part of this group
8 since he knows the financial package issue so well.
9 And let that --

10 BARRY R. WALLERSTEIN: Is this the last one, you're
11 going to ask me to join?

12 DIANE TAKVORIAN: Today.

13 JOSEPH K. LYOU: Barry Wallerstein will also be a
14 member.

15 We have Dave, Diane, Antonio, Barbara, Susan,
16 Barry, and myself. That's seven. We're okay. We're
17 not a quorum. That matter is taken care of.

18 Barbara, you've got another motion on this
19 issue, though.

20 BARBARA LEE: My motion was that we add as a formal
21 discussion item, with Dr. Lloyd and the BDO heads, a
22 discussion of funding issues and how the committee can
23 work in a supportive and proactive way with Cal/EPA to
24 secure funding for environmental justice activities in
25 the upcoming budget for the state.

1 ROBERT HARRIS: Second.

2 JOSEPH K. LYOU: Let's discuss that, if necessary.

3 MARTHA DINA ARGUELLO: We should --

4 BARBARA LEE: I think we discussed it unless
5 anybody --

6 DIANE TAKVORIAN: Call for the question.

7 JOSEPH K. LYOU: Okay. The question -- the motion
8 is to move immediately to work with Cal/EPA on
9 identifying funding opportunities for environmental
10 justice activities.

11 Did I characterize that more or less
12 correctly?

13 BARBARA LEE: Sure.

14 JOSEPH K. LYOU: Okay.

15 Then all in favor, aye.

16 COMMITTEE MEMBERS: Aye.

17 JOSEPH K. LYOU: All opposed?

18 (No response.)

19 JOSEPH K. LYOU: The motion carries.

20 And do we know --

21 BARBARA LEE: It's the group that's meeting with
22 Alan.

23 JOSEPH K. LYOU: Same group.

24 BARBARA LEE: We're just going to add it to that
25 discussion list.

1 JOSEPH K. LYOU: Okay.

2 So the same group that we had formed -- the
3 first group that we had formed to meet with Dr. Lloyd
4 and the other BDO heads will be carrying on a
5 conversation.

6 Well, we are 23 minutes ahead of schedule,
7 folks.

8 BARRY R. WALLERSTEIN: I think the lunch may
9 actually be set up over in the cafeteria. We can
10 check --

11 JOSEPH K. LYOU: So we might be able to break for
12 lunch now.

13 Then I would propose that we reconvene at
14 12:40. An hour for lunch would be sufficient?

15 BARRY R. WALLERSTEIN: We had arranged for lunch
16 for about 40, thinking there would be more committee
17 members and alternates here.

18 When I look through the room, it looks like
19 there's --

20 JOSEPH K. LYOU: About 40.

21 BARRY R. WALLERSTEIN: -- so everyone --

22 JOSEPH K. LYOU: Everyone gets lunch on South
23 Coast.

24 BARRY R. WALLERSTEIN: Don't drag everyone in the
25 cafeteria.

1 JOSEPH K. LYOU: During lunch, we were supposed to
2 have presentation on climate and greenhouse gases.

3 Unfortunately, Eileen Tuck with ARB, who was
4 supposed to make the presentation, was not able to
5 attend. So we're going to take that off the agenda
6 because of the absence of the presenter.

7 So we have a free hour.

8 LENORE VOLTURNO0: We're coming back early at
9 12:40?

10 JOSEPH K. LYOU: 12:40.

11 (A lunch recess was taken from 11:38 A.M. to
12 12:54 P.M.)

13 BARBARA LEE: I'm going to go ahead and call the
14 meeting back to order. I'm going to turn it over to
15 Lisa Kaspar. I think she's going to make a couple
16 remarks, and then you are going to go directly to the
17 tour.

18 LISA KASPAR: Correct. We met last month, and I'm
19 here to talk to you about our draft siting criteria and
20 location criteria for the hydrogen highway. We have a
21 full afternoon planned for you.

22 We're going to start out with a tour of the
23 station here at the South Coast Management District.
24 And I want to first say thank you for Matt Miyasato and
25 Air District staff for pulling together this tour and

1 the displays.

2 We're here to give you a good information
3 overview, continue to educate you about the hydrogen
4 highway, hydrogen as fuel economy and future fuel for
5 California and the fuel cell vehicle.

6 When we come back, we actually then have a
7 panel assembled, which will continue to inform you,
8 hopefully, about hydrogen, and we have someone here --
9 I have kind of an itinerary I've provided everyone,
10 which lays out -- we have Dr. Jack Brower, who will be
11 talking about -- he's from University of California
12 Irvine -- talking about hydrogen.

13 We have a fire marshal, Fire Chief Carl Baust,
14 talking about safety of hydrogen. We have -- we also
15 have Mr. Jon Slangerup from Solar Integrated, talking
16 about renewable hydrogen production.

17 And finally, we're honored to have Cynthia
18 Verdugo-Peralta here to talk about the safety -- South
19 Coast AQMD programs, and she's also vice chair of the
20 fuel cell partnership and to tell you about their
21 programs.

22 So we have a full day. And following that, we
23 will be presenting the draft siting and location
24 criteria to you for your -- for public comment and
25 input.

1 We also have some emissions information from
2 local station emissions, some comparisons to show you
3 we put together. So like I say, we have a full day.

4 And with that, I would like to introduce Matt
5 Miyasato from South Coast AQMD. He'll be giving an
6 overview of the hydrogen station here and taking you on
7 a tour to see the station.

8 MATT MIYASATO: Thanks, Lisa. I don't have much of
9 a prepared presentation, but I would like to just give
10 an overview of logistics and how we're going to provide
11 at the hydrogen station.

12 What we'd like to do is go as a group through
13 this back door and proceed out. If you'll kind of
14 follow the leader down through our -- several
15 stretches, we want to point out is we have some solar
16 panels, and we also have a fairly large C and G fueling
17 station.

18 We have a variety of vehicles for you to look
19 at, fuel cell and hydrogen internal combustion engine
20 vehicles that we worked with the fuel cell partnership
21 in getting and also other of our colleagues in the
22 industry.

23 And then, there was a group that also visited
24 our station yesterday. Unfortunately, we were unable
25 to fuel the vehicles, but they got to see the inner

1 workings of the electrolyzer.

2 We also have the hydrogen internal combustion
3 engine that's also on display here. We were able to
4 get the fueling back up; so we'll also demonstrate the
5 fueling to one of our vehicles.

6 And we'll just proceed out this door. It's a
7 little bit difficult to hear as we proceed out to the
8 station; so if you have any questions now or after you
9 see the station, if you'd like to ask questions later,
10 we'll be available for you.

11 (A tour was taken from 12:57 P.M. to 1:47 P.M.)

12 JOSEPH K. LYOU: If anyone has any questions that
13 come up this afternoon, feel free to bring them up, or
14 if you have any questions now, while we're sitting
15 down, while Matt is here, great.

16 So we're going to -- we have a panel that we've
17 assembled to talk about different aspects of hydrogen.
18 And the first speaker is Dr. Jack Brower and --

19 JACK BROWER: And I'm ready.

20 JOSEPH K. LYOU: He's just driven in from Palm
21 Springs.

22 JACK BROWER: I have to set my computer up
23 somewhere or transfer a file as fast as possible.

24 JOSEPH K. LYOU: Let's have someone else maybe
25 start, if that would be okay, because you just walked

1 in.

2 BARBARA LEE: Let's have Cynthia start.

3 LISA KASPER: Okay. That would be great.

4 CYNTHIA VERDUGO-PERALTA: Sure. I'm fine with
5 that.

6 LISA KASPER: Okay, Cynthia. We have Cynthia
7 Verdugo-Peralta.

8 CYNTHIA VERDUGO-PERALTA: Thank you for coming.
9 It's nice to see some friendly faces and some new ones.
10 I'm Cynthia Verdugo-Peralta. I'm the governor's
11 appointee to the South Coast AQMD governing board, of
12 which there are 12 of us. And we're happy to have you
13 here today; so welcome.

14 I'm going to give you an overview of our local
15 and state-wide hydrogen and fuel cell activities that
16 the AQMD has been involved with.

17 And as many of you know, we have really tried
18 to step up to the plate and be a partner, a strategic
19 partner, as well as being active on the governor's
20 advisory panel.

21 And several people from our staff including
22 myself were very involved in bringing forward A
23 document that is so widely known.

24 Right, Daniel?

25 Okay. Next slide please. This is just to give

1 you a background of our authority. Not only
2 geographically, we have four counties in Southern
3 California: San Bernardino, Los Angeles, and the urban
4 areas of Riverside. I should also mention it's just
5 the urban areas of San Bernardino and then Orange
6 County.

7 We have approximately 16 million people that
8 we're responsible for air effects of air pollution, and
9 we have nearly 27,000 facilities that are under our
10 permit.

11 So in other words, they have to come to the
12 AQMD, let us know what their emissions are and/or
13 sometimes our inspectors go out and find that
14 information.

15 The federal attainment status of the South
16 Coast basin, these are the criteria pollutants that
17 we're monitoring. We have reached our goals as far
18 carbon monoxide, nitrogen dioxide, sulfur dioxide,
19 lead, and we still need to get P.M. and ozone under
20 control.

21 This is the ozone three-year average, the
22 number of basin days that do exceed one-hour standard.
23 The bottom line are actual years that we have been
24 monitoring. And the days exceeding are on the
25 left-hand side.

1 As you can see, we were doing a very good job.
2 This has been a tough haul. And you start to see the
3 pollutants average go back up again.

4 This has really been a tough assignment for the
5 AQMD because we're doing as much as we can, but a lot
6 of problems we're facing have to do with increase of
7 population.

8 We have more trucks and cars on the road. And
9 as you well know, we have the (inaudible) to deal with.
10 Next slide. This is the one hour and eight hour, the
11 P.M. 10 and P.M. 2.5.

12 I know many of you have heard the P.M. 10, the
13 particular matter. We're even going to have a 2.5, and
14 that's the significant measurement that is the amount
15 that gets embedded in the lungs. And this is what
16 we're really concerned about.

17 This is the ozone one hour on the left. This
18 line across is the standard. And you can see where
19 it's been exceeded. This, to me, is one of the most
20 important -- next two slides are the most important
21 slides.

22 Whenever I go on my trek on trying to spread
23 the gospel of clean air, I take these next two slides
24 with me. They are just phenomenal when you are looking
25 at our basin in a bird's eye view of our basin and the

1 measurement of all the criteria pollutants that we do
2 monitor.

3 Many of these were monitored via mobile, and
4 then we also have stationary monitoring stations. So
5 this is what our basin looks like without diesel. Next
6 slide, please.

7 This is what our basin looks like if you also
8 include diesel. It's very significant, all the darkest
9 areas. Also, if you put a map of our freeway system,
10 you can also see they match on the darkest areas.

11 And down -- I don't have a pointer. But down
12 on the left-hand side, you can see the pollution that's
13 coming out of the ports.

14 This is very significant as far as I'm
15 concerned on environmental justice issues. And we are
16 also dealing with what we call accumulated risks; so
17 this is significant.

18 As many of you know, the source of our
19 pollution comes from mobile sources. This is the
20 average basin cancer risks from the air toxins and
21 1,400 in a million. So 89 percent is attributed to
22 mobile sources.

23 This is the emissions inventory when we're
24 looking at NOK's and VOC's on the NOK's side.
25 75 percent comes from mobile sources. On the VOC side,

1 51 percent, which is significant.

2 There was a children's health study done at
3 USC. Many of you have copies. I know Joe Lyou was
4 talking about this not a couple of weeks ago.

5 There you are, Joe.

6 And this is pretty interesting because I don't
7 think they expected to see the results and how damaging
8 the air pollution is to young children especially.

9 There were 12 communities that were monitored
10 through the Southern California area and even some that
11 were outside of our own jurisdiction going into the
12 Ventura APCD, and one of things they were looking at
13 was the lung function.

14 Next slide, please. And the findings were
15 that, by the age of 18, the lungs of many of the
16 children that were in the area, that lungs were
17 under-developed and will likely never recover.

18 And I've lived here all of my life, and I have
19 two kids and a husband, who also lives -- has lived
20 here most of his life, and it's significant. All three
21 of them suffer from asthma.

22 And he had -- his backyard was the railway; so
23 he's had significant exposure. And there are many --
24 if you think back on the map that I showed you
25 previously -- that are living along the freeways and

1 all the railway systems and they are significantly
2 impacted by pollution.

3 The lung -- can you go back one more, please.
4 I also wanted to mention that the low lung function is
5 second only to smoking as the risk factor. The
6 pollutants of harm, they are derived from mobile
7 sources, as I mentioned before.

8 And also, as I mentioned before, they did not
9 expect to see the effects as bad as they were on this
10 particular study.

11 The public health issues that we are looking at
12 have to do with cancer risk, respiratory diseases,
13 which I've mentioned, the ozone and the fine
14 particulates, which I've mentioned earlier, the 2.5,
15 which really gets embedded in the lungs has really been
16 tough on the children especially. And the NOK's is
17 precursor to both.

18 We were concerned with the children's health,
19 and we are very much concerned with the
20 disproportionate effect in the environmental justice
21 areas.

22 This is the Carl Moyer EJ analysis, and where
23 you have the -- I guess you'd call it gold color is the
24 highest cancer risk. And these are also identified as
25 poverty areas.

1 The white squares with the lines have to do
2 with the P.M. exposure and poverty. And then, the
3 darker gold is the cancer risk plus the P.M. exposure
4 plus poverty.

5 So it's really like they laid three maps on top
6 of each other to make us realize where these areas are
7 and how those areas really do need the most work. We
8 need to do our best job as trying to eliminate
9 pollution in those areas. And then also the Coachella
10 Valley that goes off on the right.

11 The AQMD's role in the hydrogen and fuel cell
12 technology for transportation has been having to do
13 with working with the OEM's, which are the car
14 manufacturers.

15 We've worked very closely with them. We also
16 have worked with the DOE on the vehicle infrastructure.
17 And I'm sure you've had a nice tour of the refueling
18 stations; correct?

19 Okay. Good. And we also try to focus our
20 resources on the local refueling infrastructure. I
21 don't know if there's another AQMD in the State who has
22 also put monies into an infrastructure for hydrogen.

23 We've tried to make sure that that's going to
24 be one of the solutions in the future. It is a
25 long-term solution. It is something we were working on

1 constantly.

2 We have approximately 14 stations, Matt?
3 14 stations, and we are looking to put more. However,
4 we really do feel that, unless we get more commitments
5 from the OEM's, it's really not in our best interest to
6 go forward with public monies and just put a station
7 unless there is going to be utilization.

8 We also focus on the resources of the local
9 fueling infrastructure development. And we look at the
10 merging technologies to be still the CNG vehicle --
11 hydrogen CNG and hydrogen ICE's.

12 So we're not only looking at hydrogen being the
13 solution. The near term ones, which we consider the
14 verging technologies are these other three.

15 And of course, we do have statewide
16 coordination with Cal/EPA and ARB. This is the map
17 that I was just referring to of the number of stations.
18 And I don't know if you can see that clearly.

19 There are different types of stations that we
20 have going from one basin to another. They have to do
21 with the different types of feed stock for the
22 individual stations, whether it's an electrolyzer or a
23 reformer or a mobile refueler pipeline, which means
24 from compressed natural gas plant from the grid,
25 electricity, and the ICE vehicles will be.

1 The diversity of the hydrogen production
2 technologies, we believe are important. We put monies
3 into this because we really do want to find out which
4 ones are working the best, which ones will be the first
5 to be introduced on a commercial basis.

6 And we also are looking through -- or I should
7 say, to the refueling partnerships -- I should say the
8 strategic partnerships that we have on refueling
9 stations.

10 Every time we have gone into this, we have
11 always gone with a commitment from the strategic
12 partners, as well as a commitment of vehicles. We are
13 looking at establishing infrastructure for the fleets,
14 as well.

15 This is probably going to be one of the first
16 types of multiuse for the hydrogen highway. We'll be
17 able to get more vehicles that way. And also the
18 strategic locations -- we have them closest to the
19 freeways for access.

20 And we are also introducing technologies to the
21 public. So it is a learning curve for the public.
22 This is a closer look at the hydrogen refueling
23 stations.

24 Up on the upper, right-hand corner, you can see
25 the cities that we're going into and our strategic

1 partners. The five that are on the extreme right are
2 the ICE stations, which means they are only going to be
3 used for the hydrogen internal combustion vehicles.
4 They will not be used for fuel cell vehicles. And this
5 has to do with the purity of the hydrogen.

6 The five city hydrogen ICE vehicles and fueling
7 infrastructure project, this incorporated the five
8 cities of Burbank, Ontario, Santa Monica, Riverside,
9 and Santa Ana.

10 The purpose was to develop and demonstrate the
11 hydrogen ICE vehicles and the installation of public
12 hydrogen fueling stations through partners with the
13 cities. And this was done on -- with their air
14 products.

15 The vehicle conversions were done by Quantum
16 Technologies. When you're talking about a third party
17 aftermarket conversion, this is what they are talking
18 about. And Quantum has been very good about getting
19 those vehicles up and ready.

20 The demonstration is expected to start by the
21 end of this year. The stationary projects, I also
22 wanted to bring to your attention, have to do with the
23 use of hydrogen on a stationary -- I think it's very
24 important for the hydrogen highway to incorporate
25 stationary, as well as mobile.

1 I think you're going to be able to introduce
2 this technology to more people that way, and it may be
3 able to come into sooner than the cars. We have
4 partnered with Fontana Metal Foundry and Irvine
5 Industrial Park as locations.

6 And here at our own AQMD, were you able to see
7 the solar panels that were in the carport? Great.
8 Okay. And then we have a hydrogen ICE generator. This
9 was -- picture was taken of Terry Tamin and myself and
10 an executive from Daimler Chrysler.

11 This was our grand opening, and we were very
12 happy to have Secretary Tamin in here, as many of you
13 also were here for that day. It was a very special day
14 for us.

15 This is -- on the right is the listing of our
16 strategic partners that we deal with on the hydrogen
17 highway networks.

18 Now, the California fuel cell partnership --
19 how many are not familiar with the fuel cell
20 partnership? If I could see a show of hands. Okay.

21 Just real quickly, the California fuel cell
22 partnership, it's a public-private partnership, and
23 these are the sectors that are involved.

24 It's the automotive industry, the energy
25 industry, which means those are the oil companies. And

1 the technology, they are the people who actually
2 produce and manufacture the fuel cells, and then the
3 government agencies.

4 And this is a more detailed listing of the
5 types of members that we have. The full members from
6 the automotive side, as you can see, are many. The --
7 from the oil companies, the energy side, we have the
8 four main ones there.

9 In technology, we have Ballard and UTC fuel
10 cells, which are all full members. We also have, on
11 the government side, the California Energy Commission,
12 CARB, as well as ourselves.

13 And also recently, this last year, the National
14 Automotive Center came in. They work through the
15 Department of Defense.

16 Our associate members include the transit
17 agencies, the hydrogen production companies such as air
18 products and hydrogenics.

19 And ISE is the company that has been producing
20 the fuel cell buses, of which I really have been trying
21 to make sure that we stay active in that and we bring
22 that to the public, I think, hopefully, more quickly
23 than the fleets.

24 And we'll be able to, I think, introduce the
25 public to what a fuel vehicle cell is and that it's

1 safe in their neighborhoods.

2 The fuel cell partnership has been trying to
3 demonstrate all of the advancing fuel cell vehicles,
4 the fueling stations. They've had road rallies.

5 If you've ever been involved in those where
6 they have ride and drives, they give you an opportunity
7 to drive all the vehicles that they have from the
8 different manufacturers.

9 Right now, they have a hundred plus vehicles in
10 California. 16 actual stations are open that are under
11 the umbrella of the fuel cell partnership. And they
12 have 16 more that are planned.

13 Nine fuel cell buses -- I don't believe all of
14 them are operating at this point. But they are very
15 close to. And almost 500,000 miles have been driven in
16 the fuel cell vehicles.

17 As I mentioned before, buses are very
18 important, and right now, they have them operating at
19 AC Transit and down here in Southern California at Sun
20 Line. And we've been very involved with the bus
21 program because we do see it as a first attempt to get
22 out to the public.

23 This is Santa Clara's transit agency, and they
24 are also part of the fuel cell partnership. And
25 additional activities of a fuel cell partnership, we've

1 included the technical programs, which is to evaluate
2 the station vehicle interface.

3 And if I can also mention the fuel cell
4 partnership, while it is -- the whole mission is
5 actually to try to commercialize, get to the point
6 where cell fuel vehicles are going for commercialized.

7 But more importantly, they're going to be a
8 repository of information. So we have a lot of
9 visitors from all over the United States, as well as
10 from other countries.

11 And the whole idea is to try to educate them
12 and try to bring all of the information to one
13 location. We are very much involved with the training
14 of emergency responders.

15 We deal with the fire marshals here in the
16 state. We feel the first responders need to be totally
17 familiar and comfortable not only with the fuel cell
18 vehicles but also the refueling stations.

19 And another segment of the fuel cell
20 partnership is to make sure that the public, again, is
21 informed and educated about these vehicles.

22 In summary, the advanced clean technologies,
23 they will benefit everybody if we're looking at
24 commercialization of fuel cell vehicles and deployment
25 of them.

1 Hydrogen fuel cells, they really are part of
2 the solution. As I mentioned before, they are a
3 long-term solution, and there's a spectrum of
4 technologies that are being looked at through the fuel
5 cell partnership.

6 As always, we need partners. We can't do this
7 alone. There has to be strategic partners, both from
8 the OEM side, the energy side, as well as the
9 government sectors to take this forward.

10 And that's it. Thank you.

11 JOSEPH K. LYOU: Ready, Jack?

12 Thank you, Cynthia. If anyone has any
13 questions for Cynthia, we can load this up really
14 quick.

15 BARBARA LEE: Okay. Jose.

16 JOSE CARMONA: I was asking just wondering what
17 (inaudible) and location criteria was used for the
18 existing South Coast air basin.

19 CYNTHIA VERDUGO-PERALTA: Well, the criteria of
20 the --

21 JOSE CARMONA: In terms of citing them --

22 CYNTHIA VERDUGO-PERALTA: In terms of citing them?

23 JOSE CARMONA: -- and location.

24 CYNTHIA VERDUGO-PERALTA: Actually, we have Matt
25 Miyasato and Dr. Lyou, who could give an answer to

1 that.

2 MATT MIYASATO: That's a good question.

3 Part of the criteria that we used -- there was
4 a slide in there -- I believe it was on there -- that
5 we looked at different technologies.

6 But I think one of the more critical ones is
7 identifying a partner in a demonstration site that
8 would be willing to do a demonstration along with us.

9 As we found with our deployment of other
10 alternative vehicles, namely CNG, Compressed Natural
11 Gas, I think it is critical to have a champion on board
12 that will endure with you some of these little upsets
13 that occur.

14 For example, when fueling doesn't go perfectly
15 or there's a delay, these are research projects, we've
16 got to keep in mind. So we are -- we always look for
17 partners that are going to be champions locally so that
18 they will help us deploy the technology.

19 That's one of the critical parameters. The
20 other one is identifying the technology provider for
21 the different types of technology.

22 So if you looked at our map, there are
23 different types of technologies that we demonstrate --
24 electrolyzer reformation, delivered hydrogen. It's
25 partnering with those providers and then again finding

1 the correct site.

2 So there's kind of a list of different criteria
3 that was used, but the critical ones are finding the
4 right people to market with.

5 BARRY R. WALLERSTEIN: If I could just add, we have
6 experience helping decide probably more than 75 natural
7 gas fueling stations. So you look at things such as
8 proximity to sensitive receptors.

9 We've developed a working relationship with the
10 fire departments. Board Member Verdugo-Peralta has
11 gone to some conferences with the fire marshals.

12 So when we get to the hydrogen fueling
13 stations, we get a little more -- we're learning as
14 we're going, but there's also experience in Europe, and
15 a number of members in partnership bring that
16 experience.

17 It's a combination of working with the other
18 gaseous fuels plus what we've learned going along the
19 way with the hydrogen fueling stations.

20 CYNTHIA VERDUGO-PERALTA: Let me also add to that,
21 and I'll give you two examples. In Washington, D.C.,
22 they had a very hard time -- Shell did -- had a very
23 hard time building that refueling station. A lot of it
24 had to do with the community.

25 The community didn't want to do see it there.

1 They'll even admit to you that they may not have done
2 the outreach that they could have done in the community
3 to make the community feel comfortable, make them feel
4 more knowledgeable about that technology that was going
5 to be in their backyard.

6 We also had a station going in Chino, and that
7 was put in by Chevron. Chevron made every effort to go
8 in door-to-door and make sure within, I think, a
9 five-mile radius that they talked to the community.
10 They went to the community leaders. They held
11 workshops.

12 And that particular station went in without any
13 problem from the community because they were educated
14 about it and they felt very comfortable with the
15 refueling station to go right across the street.

16 So there is -- it's like Matt said. It's not
17 only a combination of what they need physically but
18 also making sure that that community is going to be
19 okay with having a fueling station put in their
20 neighborhood.

21 JOSE CARMONA: Was all that kind of consolidated in
22 guidelines or regs, or how was -- besides individual
23 private partners doing the outreach, was there any --

24 BARRY R. WALLERSTEIN: When we've provided funding
25 available, we've put out request proposals. We

1 included in criteria in the requests for proposals.
2 And then we've had an expert technical review committee
3 that goes through the proposals.

4 In addition to that, the governing board
5 provided to staff funding for us to hire outside
6 experts that we made available to the folks that were
7 hosting or going to, you know, be the host for the
8 fueling system so we could provide to the city a
9 gaseous fuel expert or a hydrogen expert to help with
10 the design considerations that they might have.

11 BARBARA LEE: Are there any other questions? Okay.

12 LISA KASPER: Do you want to move on with the next
13 presentation?

14 BARBARA LEE: Yes.

15 JACK BROWER: Well, my name is Jack Brower. I'm
16 the associate director of the National Fuel Cell
17 Research Center at the University of California at
18 Irvine.

19 And I'm here today, coming from Palm Springs,
20 because there's a major fuel cell conference going on
21 there right now.

22 As a matter of fact, it is the world's largest
23 fuel cell conference. It is called a fuel cell
24 seminar. About 3,000 to 4,000 people are there, all
25 working at trying to advance fuel cell and hydrogen

1 technologies.

2 And I can assure you the automobile
3 manufacturers that are there, the individual agencies,
4 and all of the other industry that's there is investing
5 heavily in this technology. And there's good reasons
6 to believe it will be the technology of the future.

7 Today I'm going to focus on trying to give you
8 an objective presentation on what hydrogen really is
9 and some of the issues associated with it. Next slide,
10 please.

11 So I'll introduce hydrogen technologies. I'll
12 talk about the properties, the current uses for
13 hydrogen, how it might fit in to this whole context of
14 energy, and then what are the issues for expanded use
15 of hydrogen.

16 So one of the key things that will enable
17 hydrogen to make a big difference with regard to energy
18 efficiency and environmental sensitivity is the
19 advancement of fuel cell technology.

20 And fuel cells are somewhat like batteries.
21 They are continuous batteries that, as long as they are
22 supplied a fuel and an oxidant they can produce
23 electricity.

24 And that electrical energy can be used to
25 propel a car, or it can be used for stationary power

1 generation or for whatever other purpose.

2 The technology itself has been advanced for
3 many years and been used very safely and efficiently in
4 many different applications including some of the new
5 automobiles that you see nowadays -- just these
6 prototype vehicles.

7 The primary advantages of this technology are
8 low to zero emissions and high energy efficiency. The
9 primary disadvantage is high cost.

10 But I'm very encouraged by what I see at the
11 fuel cell seminar and individual companies presenting
12 with regard to the advancements that are being made to
13 enable this technology to be used in a cost-effective
14 and reliable manner in products that we use every day.

15 So what kinds of products are we developing in
16 this area. That includes stationary power products.
17 You see these here.

18 Many examples of them are being installed all
19 over the world -- transportation products. You see
20 buses and vehicles here and portable power products,
21 power electronics, cell phones, laptops, et cetera.

22 So what are some the properties of hydrogen?
23 Hydrogen is the lightest element we have on earth. It
24 is a diatomic molecule as it's usually present. That's
25 its stable form, H₂.

1 It's colorless, odorless, and tasteless. If
2 you have this sort of a molecule around, you really
3 can't tell it's around unless you have some sort of
4 sensor for it.

5 The key feature that enables it to be an energy
6 carrier, something that would be useful in automobiles
7 or other power generation devices, is that it has kil
8 energy in it or it is flammable.

9 This is the key thing that you need in order
10 for it to be an energy carrier. And it's higher
11 heating value is on the order of 60,000 BTU's per pound
12 or 140,000 kilojoules or kilogram.

13 And that sort of energy density is very high.
14 It has one of the highest amounts of energy per unit
15 mass. Okay. And as we see here, hydrogen is being
16 compared to all sort of other fuels that you have.

17 So if you want to shoot a rocket up into space,
18 you want to carry along the least amount of mass per
19 unit of energy in your fuel, and that's why you use
20 hydrogen. Okay?

21 Next slide, please. Now, the problem is that
22 its volumetric energy density is lower than that of all
23 these other fuels; so you need quite a large amount of
24 space volume to carry around a significant amount of
25 hydrogen.

1 And that's one of the challenges associated
2 with hydrogen. No matter what form you store it in, it
3 ends up being in this volumetric energy density range,
4 whereas all these other fuels have higher density.

5 But notice that they also carry around carbon
6 with them. Almost all of these do. Some of these
7 don't here. Next slide, please.

8 And this goes to show you, no matter how you
9 store hydrogen, you can't get quite as much energy in
10 the hydrogen as is available in the traditional fuels
11 that we use today.

12 So for example, methane. Methane stored at
13 800 bar has more energy in it than hydrogen stored at
14 that same pressure. If you look at liquid octane --
15 this is like gasoline -- that liquid gasoline has a
16 higher energy content on a volumetric basis than liquid
17 hydrogen or liquid methanol or liquid propane.

18 Now, one of the key things about the --
19 flammability of hydrogen is that it has a broad
20 flammability range. This is one of the major reasons
21 why people are concerned about hydrogen's safety.

22 Now, I know that Carl Baust will give a nice
23 presentation on hydrogen safety. I'm not going to
24 dwell too long on that. One of the properties of
25 hydrogen that makes people concerned is not the lower

1 limit.

2 This is -- what flammability limits are is you
3 take the fuel that you're interested in -- hydrogen in
4 this case -- and you mix it with various amounts of
5 air, and you see if it will sustain a flame. Okay?

6 And you can do that either inside of a cylinder
7 or inside of a bomb calorimeter or some kind of a
8 device, and this indicates that, with small amounts of
9 hydrogen in large amounts of air -- okay -- only
10 4 percent hydrogen and a large amount of air will
11 ignite.

12 But that's about the same as for methane. It's
13 actually higher than it is for propane, decane, or
14 benzine. It's really on this upper end where you can
15 mix a large amount of hydrogen with a little bit amount
16 of air, and it will still be flammable.

17 There are a lot of other properties that
18 hydrogen has. It has very high diffusivity. This
19 means that if you start with a molecule of hydrogen on
20 one side of the room, it will move about three times as
21 fast from that side of the room to the other side as
22 any other compound we know.

23 It's about three times as fast. It's very
24 mobile. You stick it in a room someplace, it won't
25 stay there. Okay. That's actually good from a safety

1 perspective -- all-right -- because it will mix and
2 diffuse faster than other compounds.

3 It has -- remember this light -- the lightest
4 element we know. It's very low density or high
5 buoyancy. Not only will it move quickly from side to
6 side but it will also move up -- okay -- because it's a
7 lot lighter than air.

8 You have all other sorts of features with
9 regard to whether you start it on -- in the case of an
10 accident, you might have a flame of hydrogen, but it
11 would have very low radiant heat.

12 That really translates to what is the color of
13 the flame and how much it will actually create fire in
14 other areas local to it. Okay.

15 So like for example, if you have a flame here
16 and it has high radiant heat, it might transfer heat to
17 this device pretty quickly.

18 If it has low radiant heat, this thing will not
19 even notice this flame is burning. Okay. And that's
20 the case for hydrogen. It's nontoxic and nonpoisonous;
21 so it's good from that sense as an energy carrier.

22 And there's been very significant advances in
23 how are we supposed to handle this -- the codes and
24 standards associated with handling hydrogen.

25 Next slide, please. So what do we use hydrogen

1 for today? We actually use more than 90 billion cubic
2 feet of hydrogen per year in the U.S. today. I think
3 this translates to 50 million tons or something like
4 that of hydrogen that we use today.

5 It's primarily used in petroleum refining or in
6 chemical processing to make plastics or food grade oils
7 or ammonia. It's also used in metals processing in the
8 electronics industry.

9 If you go to any sort of chip manufacturer,
10 they'll have hydrogen on site that they use in their
11 manufacturing processes.

12 The only place it's used as fuel today, except
13 for the small numbers of cars that we have here in
14 California and some places elsewhere in the world, is
15 in the space shuttle. Okay. And that's a very
16 significant fuel use of hydrogen.

17 Next slide, please. So what about the energy
18 context? Well, there's lots of drivers who are
19 considering hydrogen, but one of the significant ones
20 is the very fact that we were dependent today on oil
21 for meeting all of our transportation needs.

22 And that transportation need continues to grow.
23 You can see here that the need for fuel increases in
24 this sort of a fashion. And it's due to, of course,
25 cars, light trucks, heavy vehicles, and all sorts of

1 different transportation needs.

2 But at the same time, our domestic production
3 is on kind of the option trend. Also, around the world
4 today, we're seeing evidence that oil production is
5 reaching peaks. It's reaching peaks in many of the
6 major oil producing countries around the world.

7 So we have this dependence on oil today for
8 transportation. We need to look for an alternative.

9 Next slide. So in addition to there being this driver
10 of an alternative, there are reasons to consider
11 hydrogen.

12 One is that it is more environmentally
13 sensitive than many of the alternatives. The
14 conversion, either to thermal or electrical energy,
15 produces only water as a by-product. Okay.

16 So you don't have CO2 associated with the use
17 of the hydrogen. Compared to direct hydrocarbon
18 combustion, these sorts of emissions of criteria of
19 pollutants are lower; so the emissions are lower.

20 Also, the conversion devices themselves -- for
21 example, fuel cells -- are more energy efficient than
22 comparable devices. So there's a lot of environmental
23 reasons to consider hydrogen as one of the
24 alternatives.

25 We also have this dependence on foreign imports

1 today. And since hydrogen can be manufactured from
2 many different domestic sources, it offers the
3 opportunity to diversify and to produce hydrogen
4 locally. Okay. You can produce it from natural gas or
5 whatever you want.

6 Okay. I'll stay here. Now, Cynthia already
7 showed the slide where you look at the number of NOK's
8 or ozone exceedences, and it's really been amazing.

9 The number of vehicle miles traveled today,
10 which is the major source of pollutant emissions in the
11 South Coast air basin has dramatically increased over
12 the number of decades.

13 However, at the same time, mainly due to the
14 diligence of AQMD, ARB, and other agencies, our air
15 quality has dramatically improved. I mean, it's really
16 remarkable. And the technology advances that have come
17 along with that are remarkable.

18 The OEM's have produced vehicles that emit
19 fractions of what they used to emit. However, as this
20 slide shows, it shows that dramatic reduction. If we
21 had gone the same trend that we started out in 1940 --
22 okay -- we'd be way up here with regard to NOK oxide
23 emissions, hydrocarbon emissions and CO emissions.

24 However, you see this turnaround, which is
25 pretty dramatic in 1960's and 1970's. But the key

1 thing I want to show you is that we're not necessarily
2 continuing on that downward trend.

3 There is an acetonic limit that we're
4 approaching here, and in some cases, we've already
5 reached that limit and we're starting to increase in
6 the emissions even though we've ratcheted them down
7 very significantly.

8 There's a need for new technologies over and
9 above the significant advancements that we've made in
10 the past. So how can we potentially use hydrogen and
11 what are some of the issues associated with hydrogen
12 use.

13 The first one a lot of people come up with is
14 hydrogen safety. I just want to say that there's a
15 number of amazing things that have happened with
16 respect to hydrogen handling and safety.

17 And there are lots of methods for testing
18 hydrogen safety, and you can see that the types of
19 devices that we have on the vehicles today have gone
20 through these sorts of tortuous tests.

21 They've been subjected to fire. They've been
22 subjected to mechanical damage, to excessive tank
23 pressures up to three times as much as the tank
24 pressures.

25 And then they've been tested in automobiles

1 where you can see that, for a hydrogen leak, you have
2 this interesting flame just going up, whereas in a
3 gasoline case, you end up seeing the fuel pooling on
4 the ground and creating actually more of a hazard for
5 the passengers themselves.

6 And the key thing you want to think about, when
7 you're thinking about hydrogen safety, is it not only
8 has broad flammability limits but also other features
9 like low density and high diffusivity that, in the end,
10 make it possible for us to very safely handle hydrogen.

11 One of the key challenges, though, is that
12 hydrogen has that low volumetric energy density; so
13 it's hard to put a lot of hydrogen on board a vehicle
14 and use it as an energy carrier.

15 There's a lot of research and development that
16 needs to take place and is taking place to figure out
17 how we can best store hydrogen. There's issues of --
18 possibility of high pressure storage, which is the most
19 common means today.

20 There's metal hydride or other chemical bonding
21 methods that are used, but they have relatively high
22 weight. There's liquid hydrogen that is being pursued
23 by a number of developers.

24 It's a relatively good strategy for high energy
25 density, but it has the problem of boil-off gas that

1 people are trying to deal with. There are novel
2 techniques like (inaudible) nano tubes and chemical
3 hydrides.

4 Some of these are in an early stage of
5 development, and people aren't sure exactly how much
6 hydrogen storage you can obtain with these sorts of
7 devices.

8 And others have an issue with regard to how are
9 we going to handle and recycle and produce these in
10 such mass quantities.

11 The final thing I want all of you to think
12 about with regard to hydrogen and its use as an energy
13 carrier is a life cycle analysis or a well-to-wheels
14 analysis.

15 Those are the two names that are typically
16 used. Because if you use hydrogen as an energy
17 carrier, you have to account for the energy and the
18 environmental impacts of all the upstream processes.

19 And what I mean by that is, if you think about
20 fuel and how we produce it and deliver it to our
21 customers, there's a whole host of processes, a whole
22 host of issues and environmental impacts associated
23 with those upstream processes.

24 Next. And it's very important to include all
25 of these in any assessment of new technology. Next.

1 So we work with many different manufacturers to see --
2 figure out how you can best introduce this sort of a
3 new paradigm.

4 In this particular case, this is a (inaudible)
5 with Toyota where it compares the CO2 emissions. So
6 it's primarily looking at REN (phonetic) gas emissions
7 and energy efficiency in a gasoline vehicle, which is
8 indicated by this value of 1.

9 Okay. And you notice that most of those
10 emissions occur on the vehicle in the tank-to-wheel
11 portion. Notice that? Only about 10 percent or so of
12 those emissions are associated with the well to tank.
13 Okay.

14 Of course, diesel technology and gasoline
15 hybrid vehicles, they have a slightly higher efficiency
16 and lower overall emission. And if you go to the
17 future, you might expect that technology to continue to
18 improve.

19 That's what these two show. But today, we're
20 driving around fuel cell hybrid vehicles that already
21 are surpassing even the future hybrid gasoline
22 vehicles. Okay.

23 This is really encouraging. It suggests that,
24 if we go to this sort of a paradigm and we produce
25 hydrogen by the same means we're currently producing

1 them, we also have some environmental benefit.

2 As we go towards the future where we can
3 improve this even further, we can get dramatic
4 reductions so -- for example, for future natural gas
5 hydrogen production or for natural use of renewable
6 energy or natural energy to produce the fuel.

7 And we have only very little emissions
8 associated with the use of hydrogen and fuel cell
9 vehicles.

10 But you've got to be careful because some
11 cases -- for example, if you start with coal and you
12 make hydrogen out of coal and transport it and get it
13 to the end customer and so on, you can end up having
14 worse emissions than you would if you had just stayed
15 with the gasoline paradigm up here.

16 So it's very important to look at all of that
17 when you consider all of these new technologies. And
18 in the end, we are probably going to have to rely on
19 multiple input streams to get the hydrogen that we
20 need.

21 If we are going to supply hydrogen as the main
22 energy carrier to meet our transportation needs, it's
23 going to require many different fuel sources.

24 And in the end, the key thing that we need to
25 try to do is try to encourage the use of resources at

1 the same rate at which they were being replenished
2 naturally on this earth.

3 What I tried to state there is a sustainable
4 means of generating our energy carriers. For example,
5 if you want to use fossil energy resources, we should
6 use them at a rate that consumes them over millions of
7 years.

8 We're obviously not going that long to use up
9 all our oil and natural gas. Right? If we want to use
10 bio mass, well, we can do it on the order of months or
11 years. But if you want to go further down to like wind
12 energy or solar energy, then you can use those on a
13 daily basis, essentially.

14 Next line. Okay. So let me just go to the
15 conclusion here. All right. So in conclusion,
16 hydrogen is one of only a few of the energy carrier
17 options that we have available to us that can be used
18 to address both air pollution and overall energy
19 efficiency and greenhouse gas emissions concerns,
20 energy and national security concerns, as well as
21 sustainability because we can select where we're going
22 to make our hydrogen and what we're going to make it
23 out of.

24 There's been great technological progress,
25 especially in the last couple decades, both with regard

1 to hydrogen technology and fuel cell technology. And
2 the electric drive trains and the hybrid vehicles are
3 essentially the same types of platforms that we're
4 going to be using this technology on.

5 And there are many challenges that remain. I'd
6 say that this life cycle analysis is a major challenge,
7 the cost of this technology itself, but also finding
8 better means of hydrogen storage.

9 Next slide. Thank you. I'd be happy to answer
10 any questions.

11 BARBARA LEE: Next we have Mr. Jon Slangerup. He's
12 with Solar Integrated. He'll be talking about
13 renewable hydrogen.

14 MR. SLANGERUP: Thank you very much.

15 My background has been in hydrogen for a number
16 of years and just recently I did get into the solar
17 business when we consolidated Stewart Energy, the
18 company I was running in Toronto with hydrogenics,
19 which continuing the work in the area of hydrogen.

20 My current interest is in renewable hydrogen
21 based on solar technology, and my current company is a
22 public company based here in Los Angeles.

23 In fact, our renewable solar manufacturing
24 company is in the heart of Los Angeles in the Alameda
25 redevelopment corridor, which is part of a hub zone

1 redevelopment effort in the core of the city.

2 We -- I'm going to talk today about hydrogen,
3 primarily because that's the topic of this afternoon,
4 but I also want to talk specifically about renewable
5 hydrogen.

6 I don't mean to add a lot of controversy, but I
7 do believe that we are technically capable of producing
8 large amounts of hydrogen from renewable sources that
9 have, to date, been completely untapped.

10 So I'm going to talk a little bit about that
11 and provide some information to you as we go along. As
12 Jack already talked a lot about hydrogen; so I won't
13 talk at length about the properties of hydrogen.

14 I do want you to walk away understanding that
15 hydrogen and -- as an energy carrier and as an
16 application has been around for many, many decades.

17 It has been around for most of the last century
18 as a useful energy product and is used, as Jack
19 described, in a wide variety of applications that are
20 common to the industry.

21 And in fact, what's important to understand is
22 the technologies that have been developed around
23 hydrogen have been developed for all those years. So
24 it's not something new to us. It's not something that
25 we're trying to develop.

1 Now, the fuel cell, which has been under
2 development for many years is new technology. But
3 hydrogen technologies itself at the core are very
4 proven and well-understood technologies used for
5 industrial applications.

6 The business itself is a very big business. On
7 a global basis, it exceeds \$50 billion annually in
8 terms of money spent producing hydrogen. It is a big
9 business, and it is a well-known business, and it's
10 something that we don't need to be afraid of.

11 The technology that we've used for industrial
12 application for hydrogen are being now applied for
13 things like you saw a few minutes ago outside. That
14 fueling station is part of a set of technologies that
15 they developed over 50 years.

16 I want to talk a little bit about the methods
17 of production of hydrogen itself so we can look at our
18 options. Next slide.

19 It's been explained that hydrogen is produced
20 two ways. It is either produced from reforming a
21 fossil fuel. In most cases, it's natural gas, and that
22 is the -- by far, the most common way today on the
23 planet to produce large amounts of hydrogen.

24 The natural gas is abundant. It is fairly
25 cost-effective, and the technology is well developed.

1 The alternative technology that has been emerging over
2 a number of years is called electrolysis.

3 Electrolysis is the process of taking --
4 breaking down water into two elements, oxygen and
5 hydrogen, through the use of electricity. Electrolysis
6 is a fairly popular new approach, but it requires lots
7 of electricity to do so.

8 Therein lies the rub. The rub is that
9 hydrogen, as an energy carrier or ultimately as a fuel
10 source, is criticized because not only does it take a
11 fossil fuel to produce it, but if it's done with
12 electrolysis, where is the electricity coming from, and
13 are we producing that electricity from other fossil
14 sources.

15 And so, in fact, is hydrogen green and clean.
16 And the obvious answer is not very. So the question is
17 how does hydrogen, in the scheme of things, become a
18 truly renewable or green technology for powering the
19 engines of the future.

20 And I want to talk a little bit about that.
21 Let's go ahead. Let's talk a little bit about the
22 economics on a practical basis what hydrogen costs
23 today.

24 It has a very, very wide range of cost, all
25 related to the lane of hydrogen being produced and the

1 source of the hydrogen itself.

2 Today, just to define it in simple terms, a
3 kilogram of hydrogen is the energy equivalent, roughly,
4 of gallon of gasoline. That's what you can put in your
5 head in terms of this discussion.

6 A kilogram is equivalent to a gallon. So when
7 they talk about one of these vehicles that you saw
8 outside getting 60 miles to the kilogram, it would be
9 equivalent to 60 miles to the gallon.

10 Now, one kilogram of hydrogen, about the
11 cheapest you could buy, it is \$5.00 per kilogram or
12 gallon equivalent. And it could cost you as much as 75
13 or \$80.00 for a kilogram if you bought a small
14 quantity.

15 It's just simply a function of how much you're
16 buying. When it's used in either an engine or a fuel
17 cell, it's at least 30 percent to as much as 60 percent
18 more efficient than the gasoline version of that energy
19 production.

20 So it's an extremely efficient fuel when
21 combined with new technologies including the hydrogen
22 internal combustion technology that you saw that's
23 being developed.

24 The steam methane reforming, which is the
25 process of reforming natural gas or other fossil fuels

1 into hydrogen is -- SMR we call it. SMR produces
2 hydrogen cells for \$5 to \$75 and, again, based on the
3 volume you're buying.

4 It also has an impact on cost of natural gas,
5 which, as you know, natural gas has been increasing
6 rapidly as we become more and more -- as the fuel
7 becomes more and more scarce and is more broadly
8 applied for energy production.

9 Electrolytic hydrogen sells for somewhere --
10 costs between \$7.00 to \$15.00 per kilogram. And the
11 reason why say it doesn't sell is the wrong word is
12 because it's really not for sell yet.

13 I mean, it's in demonstration environments, or
14 it's in these large-scale production facilities where
15 they are using it as part of a manufacturing process.
16 But the cost is somewhere between \$7.00 to \$15.00.

17 And that's largely dependent on the cost of
18 electricity. So in this particular case, just to put
19 the math together, to produce a gallon equivalent or
20 kilogram of hydrogen it takes about 55 kilowatt hours
21 of electricity to produce that kilogram.

22 If you do the math, if that kilowatt of
23 electricity is costing you 10 cents, you do the math
24 10 cents times the amount of energy being produced, and
25 you can come up someplace in around \$5.50 for the cost

1 of the hydrogen.

2 Now, you have to add in capital cost, and that
3 could range, for very large systems, around a dollar
4 per kilogram up to \$3.00 per kilogram. You're in the
5 range of anywhere from 6.50 to 8.50 if you have a
6 10 cent per kilowatt rate of electricity.

7 Now, if you have a 20 cent cost of electricity,
8 then, obviously, you double that number. If you're
9 getting it for five cents or less, you cut that cost in
10 half. It's a wide range depending on cost of the
11 electricity.

12 Go ahead. Now, is renewable hydrogen viable?
13 Is it something we can seriously take a look at?
14 Everyone has been debating this. I have been, along
15 with a number of people in the room, have been on
16 several of the governor's advisory team for hydrogen
17 and renewable energies.

18 And the whole issue of renewable -- the
19 capacity of renewable energy is a real issue. However,
20 I have -- you know, I have to challenge some paradigms
21 with respect to renewable because, in my current
22 business, we're involved in installing solar systems on
23 very large flat roofs or low slope roof buildings.

24 Our customers -- for example, Walmart and
25 Coca-Cola and Frito-Lay -- these companies that have

1 large big box operations are installing these systems
2 on their rooftops at the cost of energy. And it's
3 economic for them to do so.

4 What's very significant is, in the State of
5 California, for example -- excuse me.

6 In the State of California, for example,
7 there's 3.6 billion square feet of flat roofs. That's
8 a lot of square footage -- 3.6 billion square feet.

9 And within the context of that untapped flat
10 space or real estate, if you were to apply solar
11 technology to that roof -- to that roof space, you
12 could generate somewhere on the order of 14 gigawatts
13 or 14,000 megawatts of clean renewable electricity per
14 hour.

15 So if, in fact, you were able to tap that, that
16 undeveloped completely unused space and apply
17 economically solar to that space, you could generate
18 about 30 percent of the base load demand for the state
19 of California in summer months with air-conditioning
20 on.

21 Now, that's a big deal. And if you -- and
22 that's only one very narrow application. I'm not
23 talking about wind. I'm not talking about geothermal.
24 I'm not talking about solar fuels in the desert. I'm
25 not talking about solar on residential rooftops.

1 I'm not talking about wave energy that's
2 emerging. I'm not talking about any of the other
3 incredible renewable technologies that are rapidly
4 emerging and are very cost effective relative to the
5 rising price of fossil fuel.

6 In my view, we can be completely independent of
7 fossil fuels in the state of California, should we
8 decide to do so, if we chose politically to pursue
9 that.

10 I believe the technology exists for us to do
11 that, and it's going to take 20 years or 30 years or
12 40 years to make that transition. Who cares. The
13 reality is the technology exists, and we can't put the
14 genie back in the bottle in terms of low fossil fuel
15 energy prices.

16 I believe that it is totally possible to pursue
17 this renewable energy approach and bring hydrogen along
18 with that as a natural opportunity for producing
19 completely green fuel or energy to the future.

20 Now, some of the things that you know -- you
21 know things are driving -- I mean, you live in this
22 world every day -- things that are driving renewable.
23 The thing that we need to stay focused on that, in
24 fact, that today, everything we're talking about is
25 really a subsidy-driven environment.

1 I mean, no matter how you shake it out, it's
2 subsidy driven and will be for a number of years.
3 There's going to be an economic sacrifice. Even though
4 it might be very small, there's an economic sacrifice
5 on a public level in order to make this effective.

6 Let me give you an example. I was in a meeting
7 with the Department of Water and Power for the City of
8 Los Angeles last week. We had a big debate about where
9 the funding for this kind -- these kinds of technology
10 applications would come from.

11 Well, you know, the Department of Water and
12 Power has among the lowest electricity rates in the
13 State of California. And they've done a fantastic job
14 keeping those rates low.

15 They are very carbon dependent to generate that
16 low cost electricity. In my view, what impact would it
17 have if you added 5 cents or even 5 percent to the bill
18 of the average consumer of electricity in the city of
19 Los Angeles.

20 Well, first and foremost, it would still be
21 cheaper than everyone around them, and they'd be able
22 to generate literally billions of dollars of subsidy
23 that they could throw into alternative energy
24 technology.

25 And they could do it in a way that would make

1 Los Angeles a leading environmental city as opposed to
2 being one of the laggards in not only the State but in
3 the entire world. There's no excuse for this.

4 And there's a very small economic price
5 associated with it. So activism is very important, and
6 sacrifice comes with that activism. And I think that
7 we're going to have to come to grips with that going
8 forward.

9 You know, a lot of us talk about the equivalent
10 of an Apollo project to get this thing kicked in gear.
11 Well, I don't disagree with that.

12 We don't have the political structure in place
13 or the desire politically, especially on a national
14 level, yet to kick something off there.

15 I'm afraid -- personally being on the
16 commercial side of things and being the business of
17 selling systems and selling them on a commercially
18 viable basis, I'm afraid that it won't happen in a big
19 way until people are really hurting or economically
20 something really falls out from the bottom.

21 I hope that's not the case. I hope all of our
22 actions as a team, you know, slowly get us there. But
23 I worry that spikes in the cost of energy, particularly
24 unplanned spikes related to interruptions in energy
25 particularly from terrorism and other acts could, in

1 fact, cause a chain reaction economically that would
2 put us in a very, very crucial or very serious crisis
3 very quickly.

4 That could be good for us or bad for us,
5 depending on how we react. I do think an Apollo
6 project or something equivalent of an Apollo project is
7 something we should push for among our inner circle as
8 we go forward.

9 Last slide. The industry, again, is in
10 different stages. The fastest growing part of my
11 business, for example, is in Europe. In Europe -- this
12 will stun you if you don't know this.

13 But in Europe, Germany, for example, is the
14 fastest growing renewable country in the world. And
15 why is that? Well, for solar, for example, which they
16 have more solar than anybody -- they put more solar in
17 last year than the rest of the world combined.

18 The United States was way down on the list.
19 California was the only blip on that screen. The
20 reason why it's so incredible is because they
21 understand sacrifice, but they also understand the end
22 game.

23 The Germans pay anyone who wants to build a
24 solar generating plant, whether it's on a house or
25 whether it's on a factory or whether it's in a

1 farmland, they will pay them 70 cents -- roughly, U.S.
2 dollars, 70 cents per kilowatt hour for every kilowatt
3 of energy generated.

4 Well, I'll tell you what. You and I and
5 anybody else we know would take our retirement savings
6 and throw it into solar if we were getting 70 cents per
7 kilowatt hour for everything generated that cost us
8 maybe about 25 cents a kilowatt to generate.

9 I can assure you that they have an aggressive
10 program. And they commit to you, by the way, for
11 20 years. It's a 20-year commitment to pay you that.
12 So it's not like a one-year thing and you -- it's a
13 20-year contract with the country to deliver that
14 electricity.

15 Now, Spain is the same way. France just
16 announced two days ago -- or I'm sorry -- Monday, a
17 very, very big similar program. They're all doing the
18 same thing. They are aggressively pursuing that. And
19 why?

20 The real question is politically why. The
21 answer politically why is when the lights go out in
22 China and in California and in everywhere else, when
23 the energy really becomes critical, these people will
24 be operating on renewable energy.

25 And they'll be able to function and compete and

1 perform in an environment based on this investment they
2 are making and sacrifice being made. So this is
3 something we seriously have to get our arms around,
4 going forward from meetings like this.

5 We have to talk about the political mandate and
6 the sacrifice at the -- you know, down to the
7 individual level that it will take. And I don't think
8 the sacrifice is big. I think it is minor.

9 And from an environmental justice standpoint, I
10 think it's disproportionate in terms of what the large
11 businesses and -- and the corporate world can pay for
12 and the public facilities. I think it's
13 disproportionately carried by that.

14 I think it is fair. I think it's something
15 that we need to consider and something we need to
16 consider in our policy making and something we need to
17 do on a public basis.

18 LISA KASPER: Thank you.

19 MR. SLANGERUP: Thank you.

20 LISA KASPER: One last panelist. We have Mr. Carl
21 Baust. He's going to be talking about hydrogen safety.
22 He's the fire chief.

23 CARL BAUST: Thanks for the raise.

24 Good afternoon. Orange County Fire Authority
25 is pleased to participate in these proceedings and

1 pleased that the committee will hear our perspective on
2 this issue.

3 My name is Carl Baust. I happen to be a fire
4 protection engineer in Orange County where there is a
5 substantial amount of hydrogen-related activity. I
6 also happen to be a fire inspector and an engineering
7 technician.

8 It gives me a very unique perspective on the
9 technology. Purpose, basic concepts -- comparing
10 hydrogen safety against conventional fuels yields no
11 clear-cut answers.

12 Despite what you have heard where hydrogen may
13 be uniformly more safer or safer than the conventional
14 fuels in use today, that's not necessarily true. It
15 depends on the circumstances.

16 Next please. The basics, as Dr. Brower alluded
17 to, was wide flammability range, low ignition. Energy
18 burns invisibly. At first glance, a nightmare fuel.
19 But upon closer examination, that may not be the case.

20 The same principles, the same concepts that
21 make it something that is of concern to safety
22 regulators like myself, namely high pressure and wide
23 flammability ranges, at the same time, adds in quick
24 disbursal.

25 Today it's mainly used for industrial processes

1 and specialty applications. In the future, on-site
2 production at fuel stations, industries and homes.
3 Next.

4 State policy, when the governor came out and
5 said we'd like to move on with this, I think there is
6 an implicit safety mandate. I think that can be taken
7 for granted.

8 Existing research development and design
9 facilities, regulators such as building and fire
10 departments do have experience with hydrogen, not
11 necessarily limited to the newer fuel cell technologies
12 but in general. So it's not a complete unknown
13 quantity to us.

14 Next, please. Fuel cell vehicles are
15 essentially electric vehicles, and fire departments do
16 have experience with electric vehicles. Stationary
17 fuel cells have been really the old people of this
18 technology. They've been quite successful.

19 They might not have been widely deployed, but
20 there have been enough of them using hydrogen to give
21 us experience in terms of regulatory issues.

22 Next. Large experiment, Nazi Germany, they did
23 not wait for the fuel. They were running on internal
24 combustion generals. Sound like a familiar scenario.

25 Nazi Germany, in the early 30's, was concerned

1 about their oil supply in Russia and the caucuses.
2 They devoted a large portion of their military budget
3 to be able to deploy their forces to secure their
4 hydrocarbon fuels.

5 Does that sound familiar? You can decide.

6 Basic concepts. Flammability limits, as we
7 mentioned before, in comparison to other types of
8 fuels, the flammability limits are somewhat wider for
9 hydrogen.

10 It requires only a fraction of the energy to
11 ignite hydrogen. Flame temperatures are approximately
12 the same. There is not much flame (inaudible), which
13 actually adds to the safety aspect of it, but once
14 again, it is the total circumstances in which hydrogen
15 is used and protected that is the end result of safety
16 decisions.

17 Next. Hydrogen supply modes for
18 transportation. There's a variety of ways you're going
19 to get hydrogen to the stations. You're either going
20 to get it by means of fuel, by means of trucks, liquid
21 hydrogen, gaseous hydrogen, possible natural gas
22 pipelines, electrolysis -- what have you.

23 This does concern regulators, particularly in
24 the early phases of this technology with having more
25 trucks on the road.

1 Ultimately, as the technology matures, well
2 production on site may very well add up to positive
3 safety dividend in that we will not have to transport
4 the fuel.

5 Next. Safe, rapid dispersal turns into water
6 vapor. Is it a good gas? It does have a proven
7 industrial record, and that's the thing to keep in
8 mind.

9 In the industrial setting, it is fairly safe.
10 In the proposed commercial setting or by use of the
11 general public, that's open to question at this time.

12 Next. Combustion hazards for emission energy
13 is the same as methane, what have you. When you see
14 these kinds of slides, you have to take them with a
15 grain of salt.

16 Yes, this flame is very conveniently going
17 straight up, and this is gasoline taking the whole
18 vehicle out. Well, this is fine unless you were in a
19 garage. Well, then, garage and the house and
20 everything else goes.

21 This is to illustrate the point I was making
22 that the total safety consideration is dependent on the
23 circumstances. You can't take -- you can't make a
24 blanket statement that, across the board, it's cleaner;
25 across the board, it's safe.

1 Next. Vehicle response training is provided by
2 the industry. The California Fuel Cell Partnership has
3 done a great job in acquainting fire departments with
4 the safety issues of fuel cell vehicles at meetings.

5 The only problem I have from emergency
6 responders is that how many of these are on the road.
7 And when I tell them in Orange County, two or three,
8 they look disgusted and turn their backs on me. We
9 really need to get more of these vehicles on the road.

10 Next, please. California Fuel Cell Partnership
11 provides the training to us. Why? Because we don't
12 have fuel cell vehicles. They are the ones with the
13 expertise.

14 Next. Hydrogen stations involve on- or
15 off-site production, which complicates permitting
16 issues. The equipment is of a variety and of
17 complications far beyond normal hydrocarbon fuel
18 stations today.

19 Normal hydrocarbon fuel stations, gasoline or
20 diesel stations are essentially storage facilities.
21 These facilities are not only going to be used for
22 storage, they'll be used for production.

23 Next. There are various ways to produce
24 them -- reformers, electrolysis -- these are smaller
25 brothers of proven larger scale equipment. They have

1 not been proven in large-scale application because they
2 are not in large-scale applications. So there are some
3 concerns about the durability of these smaller units.

4 Next. Commercial versus industrial. There is
5 no public experience in widespread hydrogen stations.
6 It simply doesn't exist because we don't have
7 widespread hydrogen stations.

8 Project review. New regulations and new codes.
9 It is great to have new codes and standards
10 development, but it takes years for expertise to
11 develop in applying those types of codes and standards.

12 And the codes and standards respond to the
13 technology, not the other way around. Codes and
14 standards are not written first, and then technology is
15 shoe-horned to fit the codes and standards. It's the
16 other way around.

17 Next. Historical California fire service has
18 more experience in evaluating this new hydrogen energy
19 technology than any other fire service anywhere in the
20 world. Expertise regulators are challenged. It's not
21 uncommon for fire marshals to say, "Congratulations.
22 I've got one of these things in my jurisdiction. I'd
23 like to help me."

24 My response is, "How many beers are you willing
25 to pay me?" The problem is that the single most

1 critical consideration in terms of safety for
2 communities is that, when one of these stations are
3 proposed, go to your local fire and building department
4 and have a sit-down with them and ask them what is your
5 expertise, what is their experience in LNG- or
6 CNG-related technologies.

7 If these need help, make sure they get that
8 kind of special help from the industry, from educators
9 like Dr. Brower to make sure they can handle this
10 technology. It's not a given.

11 Next, please. Commerce availability. Well,
12 one can see that the time to permit hydrogen stations
13 is somewhat longer the gasoline stations. You would
14 expect so.

15 Regulators are challenged, and when people are
16 challenged, they are cautious. And we really haven't
17 had all that much help from the codes and standards
18 organizations. They are moving along, but it takes
19 three and four years cycles.

20 And basically, it's almost like a guerrilla
21 warfare. It's practical experience, day in and day
22 out. I'm very fortunate because, day in and day out,
23 it's people in the industry that call me -- "Hey, Carl.
24 We want to do this at our laboratory, and we want to do
25 this at our university."

1 And that's really the best teacher. It really
2 is. Next, please. Varied considerations of hydrogen
3 stations. Is it gaseous hydrogen? Is it liquid
4 hydrogen? Is it going to be produced by gas reforming?
5 Electrolysis? It is going to be delivered?

6 Nonstandardized designs complicate approvals.
7 When you have a new technology with codes and standards
8 that have just been developed, the people that are
9 entrusted with the responsibility to enforce that, the
10 learning curve is quite steep.

11 Next. Hydrogen stations' on-site production,
12 as I mentioned before, not simply a dispensing
13 facility. Now, in some respects, there is a safety
14 plus in this regard.

15 Because you very well may not be storing large
16 portions of hydrogen on the site at the station can
17 mean a safety advantage in that, by a flick of the
18 switch you deactivate the equipment.

19 You can't do the same thing with gasoline
20 stations and wave a wand and make that 20,000 gallon
21 gasoline tank disappear.

22 Next. Industrial clearances are difficult for
23 hydrogen stations. Well, as some of the previous
24 slides showed, hydrogen has been mostly used in
25 industrial settings, and industrial settings have a lot

1 of real estate, and there's been a lot of conservative
2 codes and standards used in industrial settings.

3 We don't have that luxury on commercial
4 stations. We're not going to have the luxury of
5 creating unique standalone hydrogen stations. The
6 economics will not support that.

7 So we're developing code standards backed up by
8 research to show us the validity of codes and standards
9 that have been proposed.

10 NFPA 52, National Fire Protection Association.
11 NFPA 52 has been revised for not only CNG and LNG but
12 hydrogen. Hey. It's a nice recognition. Hydrogen is
13 coming along. Now it's in the 52 standard.

14 It gives regulators and safety people a guide
15 in knowing how to apply regulations for this
16 technology. And there are other standards that are
17 coming along.

18 Next. There are fuel station codes and
19 standards that are coming along, and they involve
20 everything from National Fire Protection Association
21 standards right through specific industries for piping,
22 valves, compressors -- what have you.

23 It's an entire entity. It's not a single
24 bottleneck. It has to be approached from a variety of
25 perspectives and concerns.

1 Next. Presently used in California, year 2001
2 California building and fire codes. California is
3 expected to adopt 2003 international codes. Yes, it is
4 2006, and we're a few years behind.

5 But it's important that we adopt international
6 codes because that's what the rest of the country is
7 adopting. I mean, you hear California referred to as
8 the fifth largest economy in the world.

9 Well, still, if it's difficult to do business
10 in this state with the equipment that's being used in
11 these stations because we don't have a uniform
12 consensus on how we're going to meet the code
13 requirements, that's a problem. So we'll be working on
14 that.

15 Next. International codes permit minimal
16 station footprints, and they've revised storage and
17 equipment locations.

18 Next. International codes permit underground
19 storage. Here's an example of cryogenic hydrogen. I
20 believe this was used in the Shell station at
21 Washington, D.C. that was referred to earlier.

22 I wish I would have had an opportunity to meet
23 some of those community activists. I wouldn't have
24 agreed with their perspective, but I would have shaken
25 their hands, at least, for being interested enough to

1 be angry enough to come out and do something, even
2 though in my personal opinion, they are somewhat
3 misguided.

4 International codes permit, yes, canopy top
5 storage installation. This means, when you're
6 refueling your fuel cell vehicles, above your head will
7 be high pressure cannisters of hydrogen.

8 At first glance, maybe something that concerns
9 you is, if these things come crashing down on me, I
10 won't be able to drive out of here.

11 Aside from that, it might be the best place to
12 have high pressure storage because, if there is a leak
13 from a pressure vessel, you wouldn't even know about
14 it. Up and away it goes.

15 Next. Is it a bad gas? Well, we have the
16 misconception of the Hindenberg and H-bomb. And
17 believe it or not, professional misconceptions are
18 common. When I talk to so-called safety professional,
19 they alluded immediately to the Hindenberg and either,
20 and I just say yes, whatever you say.

21 But there's no relationship to this technology
22 whatsoever. Next. Fuel cell vehicles require a
23 computerized station interface. Refueling protocols
24 are somewhat different, they must be seamless.

25 Occasionally, you'll hear the comment that

1 we'll have to educate the public on how safe it is.
2 You have a 5,000-pound pressure cannister of hydrogen,
3 and you're going to educate the public in case that
4 thing leaks, what they're -- you'll have an explosion
5 from static electricity.

6 The challenge is on the industry side. The
7 piping, the pressure vessels, the valves all must be
8 refined to withstand high pressures and withstanding it
9 in unique circumstances of commercial application.
10 That's the true challenge.

11 Next. These are different types of storage
12 media, and I gave your institute credit there, that
13 courtesy. Okay.

14 But we have different considerations. Unless
15 we have come up a way to support hydrogen at a lower
16 pressure, this will continue to be a major concern.
17 These high pressures 5,000 and 10,000 are far beyond
18 what we normally have in society today.

19 Next. Hydrogen powered buses can be similar to
20 CNG buses. The pressures are somewhat lower for the
21 CNG -- 3,500. Hydrogen, 5,000. But they are in use,
22 and the public accepts them.

23 It's something the public gets on every day
24 without thinking about it. This is a vehicle powered
25 by high pressure gases.

1 Next. Public reassurance. We do use high
2 pressure gases -- medical. Orange County Transit
3 Authority has buses. Next, please.

4 Codes are being developed and will enhance
5 public safety. Next. Gas dispersal models. We have
6 got to know where is that gas going to go. And there
7 are computer-generated models that have been used in
8 industry to give us an idea of what's going to happen.

9 And it's an acceptable and great tool for using
10 both with fire marshal's building, building regulators,
11 and the general public.

12 Next. Trades and professions must become
13 expert in this demanding technology. Across the board,
14 community colleges, trade programs, engineers,
15 technicians -- it's an across the board approach to
16 keep quality control here.

17 Not just at the fire department, not at the
18 building department. It won't be successful unless
19 that broad perspective is taken into account.

20 Approvals. Well, we have testing laboratories
21 that are now evaluating some of the equipment that was
22 formerly unrecognized; and so they are developing
23 criteria for uses in safety evaluations.

24 Next. (Inaudible) stopper safety issues have
25 yet arisen. Well, we've had some incidents with

1 improperly installed pressure regulation valves,
2 et cetera, et cetera, but we haven't had any kind of
3 major mishap.

4 Next. Education. Well, this was originally
5 developed for the media and education, but it would be
6 really nice if the media could be brought on in a major
7 way to show the public the true considerations of the
8 technology. It will probably be a major selling point.

9 A new energy consciousness is coming. Step on
10 the hydrogen while people that are behind hydrogen now
11 are no longer psychos. They are merely weirdos. It's
12 gaining more acceptance even in the short period of
13 time that we have.

14 People are coming out of the hydrogen closet.
15 They're not ashamed anymore. The hydrogen highway
16 leads to the hydrogen society.

17 As mentioned before, on-site production is
18 crucial. It will not be limited to a vehicle fuel. It
19 will be used as an energy source for commercial and
20 industrial application. It will be a symbiotic,
21 systemic approach to this technology.

22 Next. And that's basically it. Thank you very
23 much. Appreciate your time.

24 LISA KASPER: Thank you, Carl, very much. We have
25 some questions for you, actually.

1 CARL BAUST: Okay. I thought we were running on
2 time constraints.

3 LISA KASPER: We are, but I think it's important
4 that people have a chance to ask you questions.

5 CARL BAUST: Sure, of course.

6 JOSE CARMONA: How consistent are the permitting
7 and safety standards per each different local
8 jurisdiction that has these particular facilities?

9 CARL BAUST: That's an excellent question. And
10 based on the content that I presented to you, they are
11 not very uniform. They are at -- each fire marshal or
12 building official is presented with these stations.
13 They develop their own criteria.

14 And in some cases, what they will do is they
15 will take the services of recognized consultants,
16 professional engineers like myself, and based on their
17 expertise, will develop criteria in what is acceptable
18 for them to accept.

19 JOSE CARMONA: So is your association or agency in
20 terms of the practical approach, part of the discussion
21 in terms of how that essentially apply?

22 CARL BAUST: It's too early for us to devote
23 resources in publishing regulations on this. If we
24 have two or three stations operating in Orange County,
25 it's not something we see every day. We have to devote

1 our resources to more Main Street type of activities.

2 JOSE CARMONA: Thank you.

3 CARL BAUST: My pleasure. Any other question?

4 LENORE VOLTURNO: At what point do you think there
5 would be -- that it would be -- at what phase, during
6 the development of this, do you think that there would
7 be resources to dedicate to uniform codes?

8 CARL BAUST: Some of the international codes
9 already incorporate hydrogen considerations. The
10 reality is overall, the funding -- the societal funding
11 is not really what it should be to push this into the
12 mainstream.

13 I mean, it is happening, but it's not happening
14 fast enough. You'll always hear that the chicken and
15 egg analogy. But the real strong development in terms
16 of having a good safety handle on this -- I say this
17 not to embellish my experience -- will come from people
18 like myself, who deal with this day in and day out.

19 Because most of the codes and standards, in
20 fact, are taken from the industrial side, not from this
21 newer technology.

22 All right, then. Once again, thank you very
23 much.

24 CYNTHIA VERDUGO-PERALTA: I just wanted to add some
25 information in regards to a couple questions. SAE and

1 also through the Department of Transportation, they are
2 in the process of developing those codes and standards
3 and have been working closely with the fuel cell
4 partnership, as well as the Department of Energy.

5 Also, the State Fire Marshals Association has
6 been very closely tied to the Department of
7 Transportation on working with those codes and
8 standards.

9 And fuel cell partnership, we have an actual
10 study that we did through Parsons Brinkerhoff, and it
11 had to do with vehicles that would be either in a
12 garage or underground parking. You might want to go to
13 that website, and I believe you can get to that study.

14 UNIDENTIFIED SPEAKER: I actually have copies of
15 that study here if anyone needs one.

16 BARBARA LEE: Are there any other questions for the
17 panelists?

18 If we can, then, I would like to ask Lisa, if
19 you can go to the document that you need us
20 specifically to vote on because we are at the bare edge
21 of a quorum now and if we don't get to it, we'll lose
22 the quorum before you get your vote.

23 LISA KASPER: Okay. So you all have a packet.

24 The top side says progress report. We had five
25 public workshops between the end of October, beginning

1 of November. We had put out our concepts in a Power
2 Point presentation that I gave you in November 1st.

3 And since then, since we received comments at
4 the workshop. We put together the draft siting and
5 location criteria, which we had sent out and provided
6 to you just late last week.

7 So what we intend to do is get your comments on
8 our draft siting criteria and location criteria and
9 then take your comments and put together a packet to
10 send out for a 30-day comment period.

11 In the Senate Bill, we have to send out this
12 draft siting and criteria location for 30-day comments.
13 After we received comments during that 30-day period,
14 we'll put together the request for proposal, which will
15 then be mailed out for the bids for the vendors and the
16 different companies that are going to develop the three
17 hydrogen stations that we're funding.

18 In your packets, I put a four-page --
19 three-page document, which is our draft siting
20 criteria. So my presentation, I'll just quickly
21 reviewed the purpose of the Senate Bill 76.

22 I'll go over some funding and administrative
23 requirements and updates and followed by a description
24 of our draft locations criteria and siting criteria.

25 And then, I'd like to talk about some of the

1 draft siting criteria that were based a lot on the air
2 quality and land use handbook.

3 So the legislation -- legislature gave the area
4 resources board some station guidelines to follow when
5 we put together or hydrogen stations for the hydrogen
6 highway.

7 The stations must be cofunded. And according
8 to this bill, these are demonstration stations. So
9 these are stations that we think like somewhere between
10 university research kind of station and a retail
11 station.

12 It is our hope that these three stations can
13 demonstrate a significant step forwards
14 commercialization. The legislature also goes on to
15 state that each station shall meet or exceed the
16 environmental goals of the California hydrogen highway
17 blueprint plan.

18 So these stations shall used -- must use new
19 renewable energy and/or combine fuel dispensing with
20 electricity and heat generation. So these stations are
21 what you might term green stations.

22 The bill also states that the station locations
23 should be conveniently networked to offer fueling by
24 the vehicles in the area and be accessible to the
25 public during convenient hours.

1 We also want to encourage innovative design.
2 So this just goes a little bit over the station
3 funding. The bill's finance letter states that
4 California will fund three and three quarter million in
5 total.

6 The bill doesn't specify a certain dollar
7 amount or percentage per station; so we thought we had
8 some latitude in this area. We thought a 100 percent
9 renewable station might warrant higher funding than a
10 station that's similar but uses less renewables.

11 The bill also goes on to state the Air
12 Resources Board use money to fund the state's share of
13 the stations. So the State can fund 50 percent the
14 project, and the collective partners could commit to
15 fund the other 50 percent.

16 As far as the timetable, the funds will be
17 available to be encumbered January 1, 2006, and we --
18 so encumbered means the funds are committed by signed
19 contracts. So the entire request for proposal process
20 must be played out, and contracts must be signed before
21 the funds can be encumbered.

22 So the bill states contracts must be in place
23 by December 31, '06, but we're planning to have
24 contracts signed by July '06.

25 Let's now go over the location criteria. What

1 this means the geographic location criteria that we're
2 looking at for the stations. The -- what we're looking
3 at is to enhance the operation of established regional
4 clusters or establish a new cluster of stations in the
5 central valley.

6 We also want to encourage stations that --
7 locations that provide a convenient network for fueling
8 and to maximize the use of hydrogen vehicles that are
9 already existing in that area or that plan to be in
10 that area.

11 It's also important that, if the hydrogen is
12 not produced on site, that the hydrogen generation
13 facility should be in close proximity to the fueling
14 station. This way, we reduce any kind of
15 transportation emissions for the hydrogen.

16 We want to achieve a maximum visibility to the
17 public. We want the station to be visible, not to be
18 hidden so that people see demonstration programs and
19 get an understanding of the hydrogen stations are in
20 their area.

21 It's also important that we -- stations are
22 there for a longer term; so we want to feature anchor
23 tenants that are committed to the project for the long
24 term.

25 This map just looks at -- it's a -- four

1 blow-up maps of California. So you can see at a glance
2 the hydrogen stations, where they are located in the
3 area. You can see they are located in the areas of
4 highest population density.

5 The red circles represent known planned
6 stations and existing station locations. Here, you see
7 2 in the greater Sacramento area, 6 in the
8 San Francisco area, one in San Diego, and 13 in the
9 greater Los Angeles area.

10 If we take a look at the southern San Joaquin
11 Valley, Bakersfield, located 120 miles from the L.A.
12 cluster, this would -- could host a future bridging
13 station.

14 The same could hold true for Modesto in the
15 northern San Joaquin Valley, which is about a hundred
16 miles from both the Bay Area and Sacramento. So a
17 final note on the slide is that all the docks were
18 built out.

19 If all the docks were built out, it would
20 represent 250 stations statewide with cluster stations
21 being approximately 10 too 20 miles apart and bridging
22 stations no more than 50 miles apart. This is the
23 long-term vision of the hydrogen highway.

24 Now, the siting criteria deal with the on-site
25 specifics of the hydrogen stations. It's important,

1 very important, and it's specified in the bill that the
2 stations allow for public access.

3 Now, this could mean different things to
4 different energy providers or different partners; so
5 we're hoping that the stations are open for convenient
6 hours. And they may have an attendant on site.

7 A user might need certain training and have a
8 pin number, but in general, the station should not be
9 limited to the users. We want any fuel cell vehicles,
10 any fleets in the area to be able to get trained and
11 have access to this hydrogen station. That's very
12 important for these three stations.

13 The specifics around hydrogen storage and
14 dispensing, we would require that that meet the needs
15 of local vehicles and have some reserves so that, if
16 some extra vehicles needed to be fueled, since it is
17 public, we want to have some reserve for those vehicles
18 to fuel at the station.

19 It's important because these are demonstration,
20 and we see innovative stations and that these include a
21 public education element, something where someone could
22 learn more about hydrogen, about the hydrogen highway,
23 about the different hydrogen vehicles.

24 And so when they come to the station, there's
25 an education element. It's very important that the

1 stations comply with the relevant code and standards of
2 the local, state, and federal regulations regarding the
3 siting, storage, and dispensing of hydrogen fuel.

4 And we want to include data collection. I
5 think it's very important that, specifically, we're
6 thinking air quality data. We want to start collecting
7 emissions data from the stations and a number of other
8 types of data that will help us develop the technology
9 and know what will work in the future.

10 This slide goes over some of the codes and
11 standards for a hydrogen station. And so these
12 stations will be subject to inspection and/or
13 certification by a national, state, county, and
14 municipal authorities with the legal jurisdiction.

15 To ensure performance and safety measures are
16 met, every major component of a hydrogen station will
17 need to meet one standard or requirement. In the case
18 of planning and permitting a demonstration station, it
19 is even more important that station partners involve
20 the authorities with legal jurisdiction as early as
21 possible in the planning process.

22 We think the earlier, the better for this
23 process and to take every -- take every step possible
24 to involve the community along the way, as well.

25 So in regards to the Air Resources Board land

1 use handbook, the bill speaks that we need to develop
2 the siting criteria consistent with this handbook. As
3 you all know, this handbook deals with air quality and
4 land issues at the community level.

5 Sensitive land use requires special attention
6 because sensitive population such as children, the
7 elderly, and those with existing health problems are
8 especially vulnerable to the effect of air pollution.

9 The document contains planning recommendations
10 for sources with the potential for large pollutant
11 releases such as rail yards, chrome plating facilities,
12 and petroleum refineries.

13 The good news in this regard is that hydrogen
14 is a clean fuel. It last no storage or dispense
15 emissions, contains no toxics, and provides fuel for
16 zero and near zero emission vehicles.

17 So compared to conventional gasoline stations,
18 hydrogen stations have much lower air quality impacts.
19 And as I mentioned, hydrogen fuel cell and internal
20 combustion engines operate with zero or near zero
21 emissions.

22 Some of the cited criteria that we developed to
23 be consistent with the recommendations from the
24 handbook are that station developers should inform the
25 planning, zoning, and permitting authorities early in

1 the development process.

2 We also are going to recommend and have it part
3 of the RFP that delivery trucks should satisfy the
4 cleanest emission standard. So if the hydrogen is
5 trucked in from off site, that we would want the
6 cleanest trucks to be used in that delivery.

7 We also think it would be important to make the
8 station available to university trade and high schools
9 to train future technical technicians and engineers.
10 We think the stations could be effective in that manner
11 and, too, the station to offer safety and educational
12 technology tours and talks.

13 Through all this, we just want to promote the
14 benefits of a clean, quiet, renewable hydrogen station
15 that would draw near zero and zero emission vehicles.
16 So this slide touches on the concept of site partners.

17 This is a list of potential anchor tenants that
18 could host a hydrogen station. Many of these site
19 operators have already considerable expertise and
20 commitment to supporting transportation infrastructure.

21 Many of these entities operate their own
22 vehicle fleets and have experience in dispensing both
23 liquid and gaseous fuels. Some have access to various
24 feed stocks and provide energy products as a commercial
25 enterprise.

1 Nearly all these entities operate facilities or
2 own multiple properties in the more densely populated
3 areas throughout the state. And again, public outreach
4 and education is key. We want to have early community
5 involvement as we plan these stations.

6 We will require public notice and outreach
7 prior to ground breaking so that we can inform the
8 public and educate them about the station and to get
9 input as we develop -- plan stations so that we can
10 address anybody's concerns.

11 And again, like I said, we want to have a
12 public education element available at the station and
13 make sure that it's well known that it's a hydrogen
14 highway station.

15 And then, this is just a time line. Does
16 anyone have a question?

17 BARRY R. WALLERSTEIN: I'm hearing that we may lose
18 the quorum.

19 LISA KASPER: Well, I'm pretty much done. That was
20 the last slide. I would like to invite Daniel Emmett
21 up here for questions and Tony Brasil. He was
22 presenting the emissions information. We had some
23 comparisons to gasoline stations.

24 And so for any questions --

25 BARBARA LEE: We can go ahead and do those

1 presentations after we vote on the criteria. I just
2 want to make sure we get the vote in before you lose
3 the quorum.

4 LISA KASPER: Thank you.

5 BARRY R. WALLERSTEIN: I have just two what I'll
6 call minor things. I notice that you have for the
7 station operators that they have an attendant available
8 from 5:00 A.M. to 7:00 P.M. and then reachable by
9 phone.

10 And while I understand that the desirability of
11 having an attendant on site and available from
12 5:00 A.M., I just think you might lose some potential
13 locations with that range of hours as opposed to a
14 narrower range of hours but having someone available by
15 posted phone number. That's item No. 1.

16 Item No. 2 on the kiosk, I think the kiosk is a
17 good idea, but I'm wondering whether or not that should
18 be handled through a separate mechanism where the
19 partnership reaches out to some of its members to
20 create a general kiosk that can be used not only in
21 these three stations but throughout the network and
22 that that could be funded outside of this so that you
23 could reserve your monies in this project for the
24 fueling stations themselves and the vehicles.

25 LISA KASPER: That's a good idea.

1 BARRY R. WALLERSTEIN: And we would be happy to
2 contribute to that, by the way.

3 LISA KASPER: I'll write that down.

4 JOSE CARMONA: In terms of air quality and
5 guidelines for this, in terms of future production
6 facilities that may not be on site, albeit other phases
7 of the blueprint, will this discussion, these
8 guidelines play into the development of that, as well,
9 or will they be in kind of new set of processes just on
10 this particular kind of larger natural gas hydrogen
11 conversion process that may be the feed stock or truck
12 delivery and things like that, and where would that be
13 potentially cited?

14 LISA KASPER: I'm not sure where --

15 JOSEPH K. LYOU: The land use differently applies
16 to these stations under this bill. If you want to make
17 sure that future phases of the hydrogen highway also
18 include that vision.

19 So to the extent we have any influence over how
20 this develops, which I think we all do, we'll want to
21 include those elements in future phases, as well. And
22 I think we have set the right precedent in many ways by
23 starting up this way.

24 BARBARA LEE: Are there any -- Sue.

25 SUSAN GEORGINO: With respect to your comments

1 about in your guidelines on complying with relevant
2 code standards, local, state, and federal regulations
3 regarding siting, storage, and dispensing hydrogen
4 fuel, it's more than just dispensing hydrogen fuel;
5 it's a fueling station, period.

6 So there are things such as traffic access,
7 ingress -- it doesn't have anything to do with
8 pollution, but it does have to do with siting; so those
9 kinds of things should be included in your criteria.

10 LISA KASPER: They would have to meet that.
11 Thanks. Make sure we're very explicit about all that.

12 BARBARA LEE: Any other questions? Lenore.

13 LENORE VOLTURNO: I just wanted to know. We talked
14 briefly about the fact that there's not really any
15 uniform code standards yet, and I was kind of
16 commenting on the same bullet point that Susan just
17 talked about.

18 How is this going to be regulated if there's no
19 uniform codes and it says all stations should comply
20 with relevant code standards, local, state, federal
21 regulations?

22 How is that going to apply to stations that are
23 obviously in different districts and not a uniform
24 code?

25 Is it misleading to put in there local or state

1 and federal regulations?

2 LISA KASPER: I think some are in development. The
3 national fire protection agencies -- some have --
4 they're just drafting some codes and standards. And
5 sometimes they have to apply different -- like maybe
6 codes and standards would apply to a gasoline
7 station -- I don't know -- if someone has more
8 information --

9 TONY BRASIL: Tony Brasil. Ideally, we would have
10 identified which codes and standards that are known
11 that they would follow, but unfortunately, even the
12 natural standards are being developed.

13 And so when these stations likely to be sited
14 and installed, at that time, new codes and standards
15 may exist that don't exist now or the ones that are in
16 development may have changed. So unfortunately --

17 BARBARA LEE: Is there some kind of net under
18 which, you know, that hangs under all the things that
19 are in development so that, if nothing else is in
20 place, there's at least something?

21 TONY BRASIL: I think, the fire safety code. And
22 we're really relying on local permitting agency --

23 LISA KASPER: Okay. And gaseous -- I think gaseous
24 fuel have coded. There are codes and standards, I
25 think, that apply, but I think what happens is, since

1 there's knowing standard, each area has to go through
2 different permits so -- but they are --

3 LENORE VOLTURNO: Okay. I mean, I would hope to
4 see that clarified understand that bullet point because
5 I think it kind of misleading because people would
6 assume that those standards or regulations are already
7 in place.

8 SUSAN GEORGINO: I think it has to be more
9 expanded, personally, because you have to have a
10 catchall for codes that are in place even when there
11 aren't codes in place.

12 BARBARA LEE: Okay. Mike and then Antonio.

13 MICHAEL DORSEY: Are these sites going to require
14 an environmental impact report?

15 BARBARA LEE: I'm not sure.

16 TONY BRASIL: I might have Rick Margolin, who works
17 with us at Energy Independence Now, who led the
18 implementation topic team and blueprint plan to respond
19 to this.

20 RICK MARGOLIN: Yes. All the sites are going to go
21 have to go through the (inaudible).

22 SUSAN GEORGINO: Not necessarily the impact report
23 because (inaudible).

24 UNIDENTIFIED SPEAKER: Well, the process is
25 similar.

1 LENORE VOLTURNO: They have to go through that
2 process.

3 BARBARA LEE: Okay. Antonio.

4 ANTONIO DIAZ: Just what to respond to the slide
5 that was on the site criteria air quality and land use,
6 it says that you should satisfy the emission standards
7 in the other on that. It talks about how there's a --
8 that to reduce emissions by recommending that trucks
9 satisfy the standard; so that's not a mandate.

10 LISA KASPER: Right. When we put out this request
11 for a proposal, people will be graded. It will be a
12 grading system. So if someone has cleaner trucks, they
13 might get more points.

14 We can put out guidelines, but people give us
15 our proposal, and then we can score them based on what
16 they give us, and we'll prefer people who give us
17 cleaner trucks or have the on-site generation rather
18 than trucking it at all.

19 BARBARA LEE: Any additional questions?

20 LENORE VOLTURNO: I just wanted to add for the
21 record, that if there is going to be required
22 compliance under CEQA and NEPA, that I would hope that
23 that would be mentioned within the criteria itself.

24 LISA KASPER: Okay.

25 JOSE CARMONA: One quick last question.

1 BARBARA LEE: All right. Quick, quick.

2 JOSE CARMONA: In terms of local permitting, what's
3 the extent of public participation in terms of
4 community outreach and involvement?

5 LISA KASPER: I think that they'd have to do the
6 public notice that's required in local jurisdictions
7 for permitting a new facility, but we want to rate them
8 higher if they go above and beyond what's required and
9 do more public outreach and education early on.

10 BARBARA LEE: All right. Is that it for our
11 questions on the criteria?

12 Would anybody like to make a motion?

13 BARRY R. WALLERSTEIN: I'll make a motion that we
14 recommend approval of the criteria provided that staff
15 appropriately reflects the comments received from the
16 committee today.

17 BARBARA LEE: Is that clear what it is you need to
18 reflect?

19 LISA KASPER: Yes, it is.

20 MICHAEL DORSEY: I'll second.

21 BARBARA LEE: And we have a second. Any discussion
22 of the motion?

23 JOSE CARMONA: Will will committees be able to
24 formally still provide comment through the 30 days?

25 LISA KASPER: Committee members.

1 JOSE CARMONA: The committee members --

2 LISA KASPER: Committee members can. The committee
3 will not be able to.

4 Okay. With no further discussion, then.

5 LENORE VOLTURNO: Public comments, please.

6 BARBARA LEE: Is there any public comment on the
7 approval of the criteria?

8 JOSEPH K. LYOU: Just real quick, I mentioned this
9 the last meeting.

10 I would like to make sure that you use, as
11 criteria, something along the lines that any adverse
12 environmental impacts not affect already heavily
13 impacted communities, that the benefits of the uses of
14 this technology, then, you know, should benefit those
15 most -- those communities that most need it and that
16 there should be community acceptance for both of the
17 distribution and production facilities. Thank you.

18 BARBARA LEE: Okay. Is there any other public
19 comment on the criteria or motion?

20 All right. All in favor of the motion, say
21 aye.

22 COMMITTEE MEMBERS: Aye.

23 BARBARA LEE: Any opposed?

24 MARTHA DINA ARGUELLO: (Indicating opposition.)

25 BARBARA LEE: One in opposition.

1 Okay. Joe, I'm going to hand this back over to
2 you if that's all right.

3 Lisa, you can resume the presentations you had
4 planned.

5 LENORE VOLTURNO: Can I make one clarification
6 about the motion. Is the motion going to reflect Joe's
7 comment, as well?

8 SHANKAR PRASAD: It's a public comment. It will be
9 taken into consideration by the staff.

10 JOSEPH K. LYOU: I could sit down and make the
11 comment again; right?

12 We need to allow our court reporter to take
13 five minutes to reconstitute herself; so we'll come
14 back in five minutes, which, by that clock, would be a
15 quarter till.

16 (A recess was taken.)

17 JOSEPH K. LYOU: Lisa, you're going to tell us who
18 is going to come up. We're going to do one more
19 presentation.

20 Tony. Thank you, Tony, for your patience.

21 TONY BRASIL: I'll try to keep it as short as
22 possible. I'm Tony Brasil. I'm relatively new with
23 Air Resource Board recently. I was there seven years
24 or prior, but I took a five-year stint at the Energy
25 Commission.

1 I'll simply be going over -- I had a little
2 virtual tour here and I won't spend any time on it. I
3 think you've seen plenty of stations and how they're
4 done.

5 What's different here is I'm going to address
6 of little bit of the emissions impact that occur at the
7 station versus in the region, which is something I
8 don't think you've seen before.

9 And then the last concept I'm going to leave
10 with you is that we do need to separate the concept of
11 a hydrogen station from typical gasoline station. I'll
12 kind of touch on some reasons why.

13 This is the Chino facility, and here I'll just
14 touch on. This is the auto thermal reformer and is
15 fueling about ten cars a day. And this is Honda's
16 portable station. It's only fueling one car per day.

17 And this is in the Los Angeles Airport. This
18 is a small blueprint station and the tanks are above
19 the convenience store area.

20 I don't know if they are included up above in
21 the canopy or not. And the hydrogen for this facility
22 is delivered and it is an expandable station designed
23 to be expanded and it's fueling about 12 vehicles a
24 day.

25 And the City of Chula Vista has a mobile

1 electrolyzer. To kind of give you an idea, they're not
2 all necessarily pretty stations. This one has been
3 there for a number of years.

4 It's not a temporary station per se, where it's
5 only being located there for a years. It appears that
6 it's going to be there for a considerable period of
7 time. No one is capable of actually fueling 25
8 vehicles per day.

9 And the City of Las Vegas, I'm showing this one
10 here because they do have a fuel cell on the property
11 that is using natural gas -- I'm sorry. Natural gas is
12 the fuel supply that is being converted into hydrogen
13 for dispensing into vehicles.

14 It's also being blended for the hydrogen CNG
15 blend for some of the CNG vehicles and they're also
16 dispensing CNG from this facility.

17 So this simply demonstrates that you can tie in
18 a fueling station with the energy station concept by
19 having a stationary fuel cell on the property to
20 produce electricity.

21 Okay. Now, to get into the environmental
22 impact, that kind of Lisa touched upon, the Senate bill
23 does require that the stations that we're going to
24 co-fund do meet certain criteria.

25 Most notably is a 30 percent reduction in

1 greenhouse gas and no increase in toxic criteria
2 plumes.

3 This graph here is from the blueprint plan and,
4 as others have mentioned. The pathway that you have
5 the hydrogen produced in dispensing to the vehicle is
6 important.

7 And as you can see, on-site electrolysis
8 results in increase in criteria pollutants in total if
9 you're using an internal combustion vehicle, still a
10 little bit lower, if it's a fuel cell vehicle with bio
11 gas and some of the others, the renewable resources,
12 then you have a very small impact on emissions.

13 Here, looking at the greenhouse gas emissions,
14 again looking at the electrolysis, you're going to
15 increase the greenhouse gas impact if you use grid
16 electrolysis.

17 JOSEPH K. LYOU: Was the former slide all criteria
18 pollutants or certain criteria pollutants?

19 TONY BRASIL: It is -- essentially, it's a weighted
20 score of the criteria pollutants.

21 JOSEPH K. LYOU: Okay. Because I know South Coast
22 has a NOK's problem versus -- right -- I mean other
23 places have different types of pollutant problems so
24 the weighting kind of depends on --

25 TONY BRASIL: Yes, and this from the (inaudible)

1 benefits team, TOPA (phonetic) team report; so I'm kind
2 of just giving you the -- this is the primary point
3 here is that the pathways are important.

4 This is looking at total and not looking at
5 local or specific pollutants.

6 JOSEPH K. LYOU: Okay.

7 LISA KASPER: We can look at them separately, too.

8 JOSEPH K. LYOU: I think Barry would probably have
9 more of an interest in that than me because that's his
10 responsibility to -- for compliance reasons.

11 TONY BRASIL: And in both of those, you see that
12 the renewables, of course, are having the smallest
13 impact.

14 Here we touched on some of the issues that you
15 have with gasoline use and some of the same issues that
16 you have with hydrogen or you don't.

17 With gasoline use, you have evaporative
18 emissions and exhaust emissions from the vehicle; so
19 you're getting criteria on your toxic pollutants there.

20 With your fuel cell vehicle, you're getting no
21 emissions. And if you're using an internal combustion
22 vehicle, you're going to have the same or lower
23 emissions for the criteria pollutants if they're going
24 to be certified for use in California.

25 You do have vapor losses with gasoline along

1 the whole pathway and at the station, the impacts there
2 are significant. And of course, hydrogen has no
3 toxics. And so if it's vented, it really has no impact
4 on air quality.

5 The production and transport emissions, you
6 have it with -- clearly with gasoline use. And every
7 part of the way with hydrogen, it depends on how the
8 hydrogen is made and whether it's delivered.

9 Diesel truck emissions, you're obviously going
10 to have that with your gasoline station. But you may
11 not have that with your hydrogen.

12 If you are delivering a hydrogen, you're
13 typically going to have more diesel truck trips to the
14 station to supply the same amount of fuel to use the
15 vehicle.

16 And then, of course, gasoline has effects on
17 soil and air quality; whereas, the hydrogen production
18 would typically only have the effects on the air
19 quality.

20 Next slide, please. And here, I just
21 outlined -- I'm not going to go over it in detail -- is
22 the methodology that we use in coming up with the more
23 specific or the station impacts.

24 But in short, we did use the pathway emissions
25 methodology, using the blueprint plan largely,

1 greenhouse gas emissions is really unchanged. And so
2 the blueprint plan does use a 2010 model year vehicle.

3 The gasoline emissions are not associated with
4 refinery emissions. The assumption is that the
5 gasoline is made in Texas, for example, and delivered
6 to California.

7 So the only emissions we are addressing with
8 gasoline in the pathway is the emissions that occur in
9 California from delivering the gasoline.

10 And then any increase in the electricity
11 generation would result in increased use of natural gas
12 plant and just not using an average (inaudible).

13 And then what we did differently is we
14 separated out the local emissions at the station
15 looking at the vapor emissions and some exhaust
16 emissions calculations as to what would occur at the
17 station from the vehicles coming in and out of there.

18 And for the hydrogen, of course, if the
19 hydrogen is produced on site then we accounted for the
20 emissions that occurred there.

21 Next slide, please. And here the dark blue are
22 the emissions of NOK's that occur at the station and
23 the light blue are regional.

24 So as you see, the gasoline baseline example,
25 there are no NOK's emissions associated with it, but

1 you can see on the chart, they're relatively small.

2 The natural gas steam methane reformer does
3 have a relative increase compared to the gasoline
4 baseline. But the total for the region would still be
5 considerably lower for NOK's.

6 The other pathways, the ones that have truck
7 delivery do have some small NOK's emissions, but it's
8 not -- you can't see it on the graph here.

9 Next slide. Here is for reactive organic
10 gases. Same thing. And with the vapor emissions that
11 you have at the station, at the gasoline station, it's
12 a fairly significant effect.

13 And so the other hydrogen pathways, the impact
14 on ROG (phonetic) emissions, whether it be local, at
15 the station, or in the region are much smaller in
16 comparison.

17 Next slide. And the particulate matter
18 emissions are relatively similar. Example is the
19 gasoline stations are in a very small particulate
20 emissions associated with it, with the on-site natural
21 gas steam methane reformer, you do have some
22 particulate matter emissions that do occur at the
23 station if it's located there.

24 Next slide, please. And then lastly, for the
25 emissions impact, here is the greenhouse gas effects.

1 This is going back to how the fuel is produced and
2 transported.

3 And so looking at your gasoline baseline, if
4 you do on-site electrolysis, again, 80 percent natural
5 gas and the 20 percent renewal, which is the California
6 standard for electricity, then you will actually result
7 in an increase in your greenhouse gas footprint.

8 But you can see reduction with others, and of
9 course, with the renewables, it's a major reduction in
10 the greenhouse gas effect.

11 Next slide. And so here, I just kind of want
12 to touch on the reasons why you need to separate, I
13 think, what the effects of a gasoline station and what
14 a hydrogen station are, simply because the early
15 stations that we have are not like a typical station.

16 They're going to be very small throughput as
17 shown in the four or five stations where we have
18 anywhere from 1 to 25 vehicles being fueled; whereas,
19 at a gasoline station, you're going to have a thousand
20 vehicles or so per day coming in and being fueled.

21 And so there's really less than 2 percent of
22 the fuelings that would occur at a hydrogen station
23 would be comparable to a gasoline station.

24 And then the Senate Bill 76 does have the
25 environmental requirements that must be met regardless

1 of the renewable portion.

2 Of course, if they have the 100 percent
3 renewable, then that's going to be the easiest way to
4 meet it.

5 Certain pathways probably will not be able to
6 be used to meet the emissions criteria in Senate Bill
7 76.

8 Next slide, please. And here, lastly, is -- we
9 have the greenhouse gas graph one more time and you see
10 the dark blue lines are the ones you've actually seen
11 before.

12 And that was doing the apples to apples
13 comparison from the hydrogen station versus a similar
14 gasoline station.

15 What I've done is the small bar would show you
16 that if you have about 15 vehicles per day being fueled
17 at those hydrogen stations, this is what the relative
18 impacts of the emissions are when you're comparing it
19 to a typical gasoline station.

20 So even though you look at the middle there,
21 the on-site grid electrolysis, even though you have an
22 increase in greenhouse emissions on an apples to apples
23 comparison, the true footprint of that small station is
24 a much, much smaller effect.

25 Not that it's not important, but it does

1 separate the local emissions from the global impact to
2 some degree.

3 I didn't show this for the other pollutants
4 because they were considerably smaller in comparison
5 and really just did not show up on the chart to make a
6 representation.

7 Next slide, please. So again, Senate Bill 76
8 does narrow that the cleaner pathways are the ones that
9 are going to have to be used to meet the criteria of
10 the Senate Bill.

11 We'll be encouraging higher use of renewable,
12 trying to achieve at least 33 percent goal. Most of
13 the environmental impacts from a gasoline station
14 simply do not occur at a hydrogen station.

15 And again, it's very specific to the particular
16 pathway being used. And that's important. And so you
17 can't use the blanket statement for hydrogen stations
18 in any significant way.

19 And so what I kind of tried to show here is
20 that you can do an apples to apples comparison, and
21 looking at more at the future when you will have a
22 large scale hydrogen station fueling of a number of
23 vehicles to get that relative comparison.

24 But in reality, these early stations are going
25 to be very small. And so the local effect should be

1 relatively small, as well.

2 And so again, just to identify is that the
3 criteria with -- unfortunately, with the siting
4 criteria, you don't know exactly what bids we'll be
5 getting in the future.

6 And so when the stations are going to be sited,
7 that's the best time to address the issues that are
8 associated with the particular pathway that is chosen,
9 whether it be NOK's or ROG emissions or the local
10 impact in the area or not.

11 Thank you very much.

12 JOSEPH K. LYOU: Thank you, Tony.

13 Any questions? None.

14 I think my question, actually, is probably more
15 for Lisa.

16 The title is demonstration hydrogen fueling
17 stations location and siting criteria. It doesn't
18 mention production facilities.

19 LISA KASPER: Well, we're looking at -- we're
20 thinking the -- hoping the hydrogen is produced on
21 site.

22 And if it's not, then it would come from a
23 major hydrogen facility that's already producing
24 hydrogen; so --

25 JOSEPH K. LYOU: It's already sited.

1 LISA KASPER: -- it's already sited, already,
2 developed. We're not looking at building any new
3 hydrogen production facilities with these stations --
4 or probably not for a really long time.

5 JOSEPH K. LYOU: Because the statute says that our
6 Advisory Committee is supposed to be consulted with
7 regard to both -- the production facilities and the
8 distribution stations.

9 So as long as -- you probably need to do
10 something to your criteria or you report back or
11 whatever to make sure that that's incorporated, and so
12 it's clear that our recommendations apply to both.

13 LISA KASPER: Okay.

14 JOSEPH K. LYOU: And that we have been, in essence,
15 briefed on both.

16 Are there any comments from any surviving
17 members of the public?

18 Yes.

19 RICK MARGOLIN: I just want to clarify --

20 JOSEPH K. LYOU: Why don't you come up and talk on
21 the mike and introduce yourself for the sake of the
22 tape and the court reporter.

23 RICK MARGOLIN: My name is Rick Margolin with the
24 Energy Independence Now, and I also worked on the
25 blueprint development.

1 And I just wanted to clarify on a couple points
2 about the centralized hydrogen production facilities,
3 which is, first of all, they already -- there are
4 applicable standards; so that's going to have to
5 meet -- you know, if there is, for some reason, a new
6 site developed, those.

7 But in addition to that, if it's a State funded
8 project under SB-76, it's still going to have to meet
9 the environmental criteria from, you know, the whole
10 way.

11 So that's going to be a pretty tough nut to
12 crack if that's the case; so I just wanted to clarify
13 that because there was a discussion about the central
14 facilities.

15 JOSEPH K. LYOU: Thank you.

16 Anyone else?

17 Do you want to move to adjourn, Barry?

18 Who is going to second?

19 BARRY WALLERSTEIN: I guess I will.

20 LISA KASPER: We cleared the room, sorry.

21 Thank you.

22 JOSEPH K. LYOU: Thank you very much. We are
23 adjourned.

24

25 (The Meeting adjourned at 4:02 P.M.)

I, Sharon Campbell, Certified Shorthand
Reporter No. 8643, hereby certify that the attached
transcript is a correct copy of the original
transcript of the Meeting of State of California
Environmental Protection Agency Environmental Justice
Advisory Committee, taken before me on Tuesday,
November 15, 2005 as thereon stated.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed at Los Angeles, California, this 6th
day of December, 2005.

Certified Shorthand Reporter No. 8643
for the State of California

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PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345